

081203 MAR 27 2009

No. 08-

OFFICE OF THE CLERK

~~William K. Suter, Clerk~~

IN THE
Supreme Court of the United States

QUANTA COMPUTER, INC., QUANTA STORAGE, INC.,
QUANTA COMPUTER USA, INC., & NU TECHNOLOGY,
INC.,

Petitioners,

v.

RICOH COMPANY, LTD.,

Respondent.

*ON PETITION FOR A WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS FOR THE FEDERAL
CIRCUIT*

PETITION FOR A WRIT OF CERTIORARI

VINCENT K. YIP
TERRY D. GARNETT
PETER J. WIED
Paul, Hastings, Janofsky &
Walker LLP
515 South Flower St.
25th Floor
Los Angeles, CA 90071
(213) 683-6000

STEPHEN B. KINNAIRD
COUNSEL OF RECORD
IGOR V. TIMOFEYEV
TAMARA L. GRAHAM
Paul, Hastings, Janofsky &
Walker LLP
875 15th Street, N.W.
Washington, D.C. 20005
(202) 551-1700

QUESTION PRESENTED

Section . 271(c) of the Patent Act imposes contributory infringement liability on sellers or importers of "a material or apparatus for use in practicing a patented process" who "know[] *the same* to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use." 35 U.S.C. § 271(c) (emphasis added). In this patent infringement action, respondent Ricoh Company, Ltd. alleged (among other things) that petitioners contributorily infringed their patents by selling optical disc drives that direct infringers use to practice patented processes of writing optical discs. Here, it is undisputed that the same optical disc drives that are used to perform the allegedly infringing processes have substantial noninfringing uses. Nonetheless, the Federal Circuit held (over a strong dissent) that a jury could find contributory infringement liability under section 271(c) if the disc drives contain "hardware or software *components* that have no substantial noninfringing use other than to practice Ricoh's claimed methods." App. 30a (emphasis added). The question presented is:

May contributory infringement liability under section 271(c) of the Patent Act be imposed even though the "apparatus" sold has substantial noninfringing uses, solely because certain hardware or software components of the apparatus do not?

PARTIES TO THE PROCEEDING

In addition to the parties listed in the caption, Business Line Data, Philips Optical Storage, and Philips Taiwan, Ltd. were defendants in the district court.

Quanta Computer, Inc. is the parent corporation of Quanta Computer USA, Inc. Quanta Computer, Inc. owns more than 10% of the stock of Quanta Storage, Inc. No other publicly held company owns 10% or more of the stock of any of those companies. NU, Inc. is the parent corporation of NU Technology, Inc. No other publicly held company owns 10% or more of the stock of NU Technology, Inc.

TABLE OF CONTENTS

	Page
QUESTION PRESENTED	i
PARTIES TO THE PROCEEDING	ii
TABLE OF CONTENTS.....	iii
TABLE OF AUTHORITIES	v
TABLE OF APPENDICES	viii
OPINIONS AND ORDERS BELOW.....	1
JURISDICTION.....	1
STATUTORY PROVISIONS INVOLVED	1
STATEMENT OF THE CASE.....	1
A. Introduction.....	1
B. Statement of Facts	3
1. Petitioners.....	3
2. Products	3
3. Patents	5
4. Proceedings In The District Court	6
5. Proceedings In The Federal Circuit	7
REASONS FOR GRANTING THE PETITION	10
A. The Federal Circuit's Rule Contravenes The Plain Text Of Section 271(c).....	10

TABLE OF CONTENTS

(continued)

	Page
B. The Federal Circuit's Rule Conflicts With Its Own Prior Precedent	17
C. The Federal Circuit's Rule Contravenes The Precedent Of This Court.....	20
D. The Surpassing Importance Of The Rule Below In The Pervasive- Computing Era Justifies This Court's Immediate Review	25
CONCLUSION.....	29

TABLE OF AUTHORITIES

	Page
CASES	
<i>AquaTex Industries Inc. v. Techniche Solutions</i> , 419 F.3d 1374 (Fed Cir. 2005) ...	19, 20
<i>Aro Mfg. Co. v. Convertible Top Replacement Co.</i> , 377 U.S. 476 (1964)	23
<i>Artuz v. Bennett</i> , 531 U.S. 4 (2000)	14
<i>Asgrow Seed Co. v. Winterboer</i> , 513 U.S. 179 (1995)	17
<i>Badaracco v. C.I.R.</i> , 464 U.S. 386 (1984)	14
<i>Deepsouth Packing Co. v. Laitram Corp.</i> , 406 U.S. 518 (1972)	24
<i>eBay, Inc. v. MercExchange, L.L.C.</i> , 547 U.S. 388 (2006)	2, 17, 29
<i>Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.</i> , 535 U.S. 722 (2002)	17
<i>Hodosh v. Block Drug Co.</i> , 833 F.2d 1575 (Fed. Cir. 1987).....	9, 18, 19, 20
<i>KSR Int'l Co. v. Teleflex, Inc.</i> , 550 U.S. 398 (2007)	2, 17, 29

TABLE OF AUTHORITIES
(continued)

	Page
<i>Merck KGaA v. Integra Lifesciences I, Ltd.</i> , 545 U.S. 193 (2005)	17
<i>Metro-Goldwyn-Mayer Studios, Inc. v.</i> <i>Grokster, Ltd.</i> , 545 U.S. 913 (2005)	<i>passim</i>
<i>Microsoft Corp. v. AT&T Corp.</i> , 550 U.S. 437 (2007)	2, 16, 17, 29
<i>Sony Corp. of America v. Universal City</i> <i>Studios, Inc.</i> , 464 U.S. 417 (1984)	<i>passim</i>

STATUTES

28 U.S.C. § 1254(1)	1
28 U.S.C. § 1295(a)(1)	1
28 U.S.C. § 1338	1
35 U.S.C. § 271(a)	6, 10, 11
35 U.S.C. §§ 271(a)-(i)	1
35 U.S.C. § 271(b)	<i>passim</i>
35 U.S.C. § 271(c)	<i>passim</i>
35 U.S.C. § 271(f)(1) & (2)	16
35 U.S.C. § 283	17

TABLE OF AUTHORITIES

(continued)

Page

LEGISLATIVE MATERIALS

S. Rep. No. 82-1979 (1952), <i>as reprinted in</i> 1952 U.S.C.C.A.N. 2394	23
--	----

OTHER AUTHORITIES

5 Donald S. Chisum, <i>Chisum on Patents</i> (2005)....	23
---	----

<i>A World of Connections</i> , The Economist, Apr. 28, 2007	26
---	----

James Truchard, <i>In 2008, Sensors Are</i> <i>Everywhere</i> , Embedded Systems Design, Nov. 17, 2008	26
--	----

Jonathan Sidener, <i>Automation Nation;</i> <i>America Races Toward A Don't-Do-It-</i> <i>Yourself Future</i> , San Diego Union-Tribune, Nov. 10, 2003	26
---	----

National Academy of Sciences, <i>Embedded,</i> <i>Everywhere: A Research Agenda for</i> <i>Networked Systems of Embedded</i> <i>Computers</i> (2001).....	25
--	----

<i>Trend Wars: Embedded Systems</i> , IEEE Concurrency, Oct. – Dec. 2000	26
---	----

TABLE OF APPENDICES

	Page
Appendix A	
Opinion of the U.S. Court of Appeals for the Federal Circuit (Dec. 23, 2008)	1a
Appendix B	
Opinion and Order of the U.S. District Court for the Western District of Wisconsin (Aug. 22, 2007)	46a
Appendix C	
Order of the U.S. Court of Appeals for the Federal Circuit Denying Petitions for Rehearing and Rehearing <i>En Banc</i> (Feb. 17, 2009)	80a
Appendix D	
Judgment of the U.S. District Court for the Western District of Wisconsin (Aug. 24, 2007)	82a
Appendix E	
35 U.S.C. § 271	84a

OPINIONS AND ORDERS BELOW

The opinion of the United States Court of Appeals for the Federal Circuit is reported at 550 F.3d 1325 (Fed. Cir. 2008) and reproduced in Petitioner's Appendix ("App.") at 1a-45a. The opinion of the United States District Court for the Western District of Wisconsin is reported at 579 F. Supp. 2d 1110 (W.D. Wis. 2007) and reproduced at App. 46a-79a.

JURISDICTION

The judgment of the Federal Circuit was entered on December 23, 2008. The order denying the petition for rehearing was entered on February 17, 2009. App. at 80a. This petition is timely filed within 90 days of the Federal Circuit's denial of rehearing. This Court has jurisdiction under 28 U.S.C. § 1254(1). The district court had jurisdiction pursuant to 28 U.S.C. § 1338, and the court of appeals had jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

STATUTORY PROVISIONS INVOLVED

Section 271 of Title 35 of the U.S. Code is reproduced at App. 84a-89a.

STATEMENT OF THE CASE

A. Introduction

In a per curiam opinion, a divided U.S. Court of Appeals for the Federal Circuit decided what it acknowledged to be "an important, and previously unresolved, question concerning the scope of liability for contributory infringement, the construction of

§ 271(c), and the interpretation of the Supreme Court's decisions" on contributory infringement. App. 22a. The Federal Circuit held that contributory infringement liability may be imposed even if the apparatus used to practice a patented process has substantial noninfringing uses, so long as the apparatus contains "hardware or software components" – i.e., electronic circuits and certain modules of software code – "that have no substantial noninfringing use other than to practice Ricoh's claimed methods." App. 30a. That decision starkly conflicts with the language of the statute, prior Federal Circuit precedent, and the precedents of this Court. In this circumstance, the Court has not hesitated to intervene and reverse the Federal Court's decisions. See, e.g., *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437 (2007); *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007); *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006).

This Court's immediate review is imperative because of the extraordinary business uncertainty the decision creates. Most complex consumer and industrial products contain electronic circuits and software, and an individual block of software code is typically devoted to a discrete and limited operation. If all a patentee must show is that any of the myriad components of an apparatus has no substantial noninfringing use, then this critical limitation on section 271(c) liability is effectively extinguished for complex products. Sellers and importers of such products will be subject to potentially massive liability for infringement by third parties, even in the absence of proof that the seller or importer took any affirmative acts with the specific intent to induce

infringement. This Court should grant certiorari to resolve this important issue.

B. Statement of Facts

1. Petitioners

Petitioner Quanta Computer, Inc. ("QCI") manufactures notebook computers. It does not sell notebook computers under its own brand name or directly to individual consumers; instead, it sells the notebook computers it manufactures to computer companies (such as Dell) for resale under that company's brand.

Petitioner Quanta Storage, Inc. ("QSI") designs and manufactures optical disc drives. It does not sell optical drives directly to individual consumers, but instead to other electronics or computer companies. QSI is the only one of the Petitioners that designs or manufactures optical disc drives.

Quanta Computer USA, Inc. ("QCA") is a California company that repairs notebook computers for certain branded computer companies.

NU Technology, Inc. is a California company that sells electronics products, including optical disc drives.

2. Products

An optical disc is a medium for storing data that can be read or written by lasers. Optical discs can store more data than other commonly used storage media (such as magnetic floppy discs). Some optical discs (such as a CD-ROM or a DVD-ROM) can only be read; others are recordable or rewritable. Recordable optical discs (e.g., CD-R, DVD-R) allow a user to

permanently record data. Rewritable optical discs (e.g., CD-RW, DVD-RW) allow a user to record, erase, or overwrite data. App. 3a.

An optical disc drive is the device used to read or write data on the optical disc. For all of Quanta's disc drives at issue in this litigation, the same disc drive is used to read data from the disc and write (or rewrite) data to the disc. In an optical disc drive, the optical disc is rotated underneath an optical pickup head. The optical pickup head contains a laser that is shone onto the disc, and multiple detectors to detect the reflection of the laser from the disc's surface. By moving the optical pickup head radially (i.e., along a straight line from the center to the outer edge of the disc) while rotating the disc, the optical pickup head can read from or write to any location on the surface of the disc.

An optical disc contains marks (either physical depressions, or changes in the material properties) that reflect light differently. The disc is read by shining the laser on the disc and interpreting the changes in the amount of light reflected. For optical discs that are recordable, pulses of laser light are used to cause changes in the disc material, creating the marks that represent the recorded data. The same laser is used to read from and write to the optical disc, but it cannot perform both functions at the same time.

In addition to the laser and optical pickup head, optical disc drives also contain a computer chip (often called a controller). A set of software, known as firmware, is resident in the controller and controls the operation of the disc drive, including the speed at

which the disc is rotated, the intensity of the laser beam, and (when recording) the pulsing of the laser.

3. Patents

Respondent Ricoh Company, Ltd. brought this patent infringement action against the Quanta petitioners and other defendants alleging both direct and indirect infringement of four patents.

Two of Ricoh's patents are relevant to this petition: U.S. Patent Nos. 5,063,552 ("the '552 patent") and 6,661,755 ("the '755 patent"). Ricoh asserted only method claims under each patent (not apparatus claims). The '552 patent discloses a specific "method for controlling the velocity at which a disc drive spins an optical disc." App. 6a (reproducing claim 1 of the '552 patent). "Optical disc drives typically spin discs at either a constant angular velocity ('CAV') or a constant linear velocity ('CLV')." App. 6a-7a. Ricoh's '552 patent claimed a "Zone-CLV" method that "divides an optical disc into annular zones, wherein each zone is recorded at constant linear velocity, but different linear velocities are used for different zones." App. 7a.

The '755 patent claims a method of writing data to optical discs in multiple sessions. Data sent to the optical drive are typically buffered before being recorded onto the optical disc. If the buffer unexpectedly runs out of data while recording, the CD encoder chip may output dummy data that can, if recorded, corrupt the disc. "The methods of the '755 patent solve this problem by allowing the write operation to pause when the buffer runs low, which ensures that no dummy data is recorded to the disc." App. 8a (reproducing claim 1 of the '755 patent).

4. Proceedings In The District Court

The district court granted summary judgment to petitioners on all four of the asserted patents.

With regard to the '552 and '755 patents, Ricoh claimed that petitioners directly infringed the patents, 35 U.S.C. § 271(a), actively induced the infringement of others, *id.* § 271(b), and contributorily infringed the patents by selling products that they knew were adapted for an infringing use and lacked substantial noninfringing uses, *id.* § 271(c).

In granting summary judgment, the district court found no genuine issue of fact as to infringement. On direct infringement under section 271(a), the district court held that sale of an apparatus does not directly infringe a method claim. App. 72a. On induced infringement under section 271(b), the district court ruled that the "plaintiff adduce[d] no evidence that Quanta encouraged infringement by its customers." App. 77a.

On Ricoh's contributory infringement claim under section 271(c), the district court granted summary judgment because "[t]here is an important limitation on this theory of infringement that plaintiff does not acknowledge: no infringement occurs if the accused device is 'suitable for substantial noninfringing use.'" App. 73a (quoting 35 U.S.C. § 271(c)). The uncontroverted evidence was that QSI's disc drives had substantial noninfringing uses:

All of the accused devices are capable of reading discs as well as recording to them. Plaintiff does not deny that reading the discs is a noninfringing use or that the use of drives to read discs is

substantial. In any event, common sense requires a conclusion that reading (that is, playing the disc) is a substantial use.

App. 74a.

5. Proceedings In The Federal Circuit

On appeal, a divided Federal Circuit reversed the district court's grant of summary judgment with respect to Ricoh's indirect infringement claims.

With respect to Ricoh's 271(b) claim, the majority held that the district court had improperly discounted certain evidence relevant to Quanta's specific intent to induce infringement, and remanded to the district court to determine whether a material issue of fact existed regarding inducement. App. 32a-34a.

With respect to Ricoh's 271(c) claim of contributory infringement, the majority took no issue with the district court's determination that Quanta's disc drives had substantial noninfringing uses. However, it "accept[ed] as true Ricoh's evidence that Quanta's drives contain at least *some distinct and separate components* used only to perform the allegedly infringing write methods." App. 22a (emphasis added). That evidence consisted of a statement in the supporting affidavit of Ricoh's expert that "electronic circuitry, firmware elements, and other components of the accused Quanta drives that [allegedly perform the methods of the '552 and '755 patents] have no practical use other than' performance of those methods." App. 41a & n.1

(Gajarsa, J., dissenting in part) (citation omitted); see also App. 70a.¹

The majority stated that if Quanta had sold an independent device that could only be used to practice the patented methods of the '552 and '755 patents, it would be subject to section 271(c) liability as a contributory infringer. "It thus follows that Quanta should not be permitted to escape liability as a contributory infringer merely by embedding that [device] in a larger product with some additional, separable feature before importing and selling it." App. 24a. If it did not adopt such a rule, "evasion of the protection intended by Congress in enacting § 271(c) would become rather easy;" manufacturers or resellers could bundle infringing and noninfringing components into a single product. App. 24a.

The Federal Circuit acknowledged that this Court's prior precedent had required proof that the "article in commerce" – here, the disc drive – had no substantial noninfringing use in order to establish contributory infringement liability. App. 26a (citing *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005)). Nonetheless, the Federal Circuit reasoned that the statutory purposes would be served by a rule that imposes contributory infringement liability "[w]hen a manufacturer includes in its product *a component* that can only infringe," even if the article in commerce itself has substantial noninfringing uses. App. 26a (emphasis added). Accordingly, the Federal Circuit reversed the

¹ "Firmware" refers to the software stored on the chips in Quanta's optical disc drives. App. 30a n.8.

grant of summary judgment on Ricoh's section 271(c) claim, holding that Quanta was subject to contributory infringement liability if its "optical disc drives contain hardware or software components that have no substantial noninfringing use other than to practice Ricoh's claimed methods." App. 30a.

Judge Gajarsa dissented as to the court's contributory infringement holding. He faulted the majority for deciding this issue "on the basis of policy concerns without due regard for the text of 35 U.S.C. § 271(c)," and identified "three errors" committed by the majority. App. 39a (Gajarsa, J., dissenting in part). First, the majority failed to heed that liability under the statute turns on whether the article the defendant actually sells has noninfringing uses, not on whether its components do. Indeed, the Federal Circuit had previously so held in *Hodosh v. Block Drug Co.*, 833 F.2d 1575 (Fed. Cir. 1987). App. 41a-42a. "Second, the majority opts for an over-inclusive application of § 271(c) that directly contravenes Supreme Court guidance on how this section ought to be interpreted." App. 40a. By departing from the "article in commerce" rule of *Grokster* and *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984), the majority "subjugates the public interest in access to unpatented devices to a patentee's interest in realizing economic reward from a patented method." App. 42a-43a. "Third," Judge Gajarsa noted, "§ 271(c) imposes contributory infringement liability based solely on offering to sell or selling an unpatented good, but the majority's analysis is (on its face) driven by a concern for activities other than such sales": namely, Quanta's design and manufacture of products. App. 45a. Judge Gajarsa accordingly would have affirmed the

district court's judgment in favor of petitioners on contributory infringement. *Id.*

REASONS FOR GRANTING THE PETITION

A divided Federal Circuit decided an "important" question of patent law within its exclusive jurisdiction, App. 3a, but decided it wrongly. The Federal Circuit's expansive construction of contributory infringement liability under section 271(c) of the Patent Act contravenes the plain text of the statute, its own precedents, and this Court's precedents. This Court's review is necessary to clarify the law and prevent the untoward business uncertainty created by the decision below.

A. The Federal Circuit's Rule Contravenes The Plain Text Of Section 271(c).

Under the Patent Act, "whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefore, infringes the patent." 35 U.S.C. § 271(a). In addition to liability for direct infringement under section 271(a), the Act provides for two forms of indirect infringement liability. Section 271(b) provides that "[w]hoever actively induces infringement of a patent shall be liable as an infringer." *Id.* § 271(b). Section 271(c) creates liability for contributory infringement:

Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus

for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

Id. § 271(c).

The meaning of the statute is plain. To prove a defendant liable as a contributory infringer of a method patent, all the statutory elements must be proven for the "material or apparatus" at stake. The patentee must prove that (1) the defendant offered or sold in (or imported into) this country "a material or apparatus for use in practicing a patented process;" (2) the material or apparatus "constitut[ed] a material part of the invention;" (3) the defendant knew "the same" material or apparatus "to be especially made or especially adapted for use in an infringement of such patent, and" (4) "not a staple article or commodity of commerce suitable for substantial noninfringing use." *Id.*

The Federal Circuit disregarded these essential statutory elements, and decided the contributory infringement issue "on the basis of policy concerns without due regard for the text of 35 U.S.C. § 271(c)." App. 39a (Gajarsa, J., dissenting in part). Noting that a copy of machine-readable software may be a "component" of a patented invention, App. 22a, the court of appeals held that the jury could treat electronic circuits or "modules" of software as "components" of the disc drives. Even if, *arguendo*,

such circuits or modules of software code are drive components, that is irrelevant to a claim of contributory infringement of a *method* patent. "[A] component of a patented machine, manufacture, combination or composition" can be the basis of a contributory-infringement claim, 35 U.S.C. § 271(c) (emphasis added), but Ricoh did not allege contributory infringement of any patented machine, manufacture, combination, or composition. The asserted method claims of the '552 and '755 patents describe respectively only patented processes "for controlling the velocity at which a disc drive spins an optical disc" and "writing data to optical discs in multiple sessions." App. 6a-8a. By the express terms of the statute, contributory infringement of a method claim requires proof of unlawful sale or importation of "a material or apparatus for use in practicing a patented process," not mere components of an apparatus. 35 U.S.C. § 271(c). Electrical circuits or modules of software code are not colorably an independent material or apparatus used in practicing the patented processes. Ricoh's contributory infringement claims should have risen or fallen based on the uses of Quanta's optical disc drives (not discrete components thereof).

Furthermore, as the dissent observed, "irrespective of whether the hardware and software components of Quanta's drives identified by Ricoh constitute a separable component or a material or apparatus for use in practicing Ricoh's method claims," such components cannot support section 271(c) liability because they were not the articles that petitioners offered, sold, or imported. App. 41a (Gajarsa, J., dissenting in part). The offer for sale, sale, or importation is the act giving rise to a

defendant's liability under section 271(c); it therefore follows that a jury must find that the article that the defendant actually offered, sold, or imported meets the statutory requirements that render the act unlawful.

Indeed, section 271(c) is explicit on this point. First, it requires that the "same" material or apparatus that is offered, sold, or imported be known "to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use." 35 U.S.C. § 271(c). Second, the last clause of section 271(c) just quoted makes plain that it is the "commodity of commerce" and not an individual component thereof that is analyzed for substantial noninfringing use. Because petitioners sell disc drives, not discrete components thereof (such as electronic circuits or modules of software code), and because it is undisputed that the drives themselves have substantial noninfringing uses, Ricoh cannot prove petitioners liable as contributory infringers.

The Federal Circuit did not engage in close textual analysis of the statute in devising its "component" rule for method patents. Rather, the Federal Circuit fashioned that rule because otherwise, in its judgment, "the protection intended by Congress in enacting § 271(c)" would be too easily evaded. App. 24a. According to the court below, a manufacturer could escape liability by bundling infringing components with noninfringing components: *i.e.*, "by selling a device that simply embedded the hardware for practicing the patented process within other hardware that also performs another process, or by

combining the enabling hardware with other hardware before importing it." App. 25a.

The Federal Circuit's analysis is flawed in multiple respects. First, "[w]hatever merits these and other policy arguments may have, it is not the province of [a court] to rewrite the statute to accommodate them." *Artuz v. Bennett*, 531 U.S. 4, 10 (2000); *Badaracco v. C.I.R.*, 464 U.S. 386, 398 (1984) ("Courts are not authorized to rewrite a statute because they might deem its effects susceptible of improvement."). The statute makes contributory infringement liability depend on a finding that the material or apparatus that is sold or imported has no substantial noninfringing uses; the Federal Circuit was not entitled to broaden the statutory liability to reach an apparatus with substantial noninfringing uses, solely because a single component thereof has no such use.

Second, the "bundling" concerns that troubled the Federal Circuit are not germane to this case and do not justify the rule it imposed. The court of appeals worried about the hypothetical case where a product sold separately would contributorily infringe the patent, but would not if combined with a noninfringing product. The Court gave as an example a manufacturer of an infringing telephone answering machine that sold two versions of the device: "a stand-alone version and a version with a built-in telephone." App. 24a n.7. The Federal Circuit refused to countenance a rule whereby "no contributory liability would exist despite the presence of a component that, if sold alone, plainly would incur liability." App. 24a.

But here there is no component or apparatus "that, if sold alone, plainly would incur liability." A direct infringer cannot infringe Ricoh's patents by using the "components" identified by Ricoh — electronic circuitry and software elements — on a standalone basis. Ricoh never disputed that a direct infringer must use the disc drive apparatus — including (for example) its laser, light detectors, and rotational and loading mechanisms — to practice the patented processes of the asserted claims of the '552 and '755 patents. And, as the district court noted, it is undisputed that that apparatus has substantial noninfringing uses. App. 73a-74a. Ricoh never contended (much less adduced evidence) that the identified components could be used in isolation to practice the patented processes.

Thus, regardless whether there are circumstances in which the sale or importation of a product bundling an infringing apparatus with a noninfringing apparatus would be properly treated as the sale or importation of two distinct apparatuses for purposes of section 271(c), the statutory language cannot be twisted to support the Federal Circuit's "component" rule. Under section 271(c), the patentee must prove that the "same" "material or apparatus for use in practicing a patented process" that is offered, sold, or imported lacks "substantial noninfringing use." 35 U.S.C. § 271(c). The Federal Circuit cannot disassemble the apparatus used by direct infringers into a list of isolated components, and attach contributory infringement liability so long as "at least some distinct and separate components [are] used only to perform the allegedly infringing write methods." App. 22a.

In short, as the dissent observed, the Federal Circuit's new rule improperly "eliminate[s] the § 271(c)-mandated inquiry relating to whether what was actually sold was suitable for a substantial noninfringing use." App. 42a (Gajarsa, J., dissenting in part). This misstep is of the same kind that caused this Court to intervene to correct the Federal Circuit's misinterpretation of the companion provision of section 271(f) in *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437 (2007).

Section 271(f) prohibits both active inducement and contributory infringement with regard to anyone who "supplies or causes to be supplied in or from the United States" the components of patented inventions for use abroad. 35 U.S.C. § 271(f)(1) & (2). The Federal Circuit in *Microsoft* had invoked the same justifications for disregarding the statutory text that it did here to promote a more "patent-protective" policy. *Microsoft*, 550 U.S. at 458. Like here, the Federal Circuit claimed that the protections of section 271(f) would be too easily evaded if liability were limited to the actual supply of components, as the text of the statute demanded. *Id.* at 456-57. Just as the Federal Circuit here sought to create liability for "bundling" when the statute only prohibited "sales" of an apparatus with no substantial noninfringing use, App. 45a (Gajarsa, J., dissenting in part), the Federal Circuit in *Microsoft* sought to create liability for facilitating the foreign copying of software master files even though the statute limited liability to those who supplied components of patented inventions. *Microsoft*, 550 U.S. at 456-57. This Court reversed the Federal Circuit in *Microsoft* because "nothing in § 271(f)'s text" permits the

imposition of liability except upon proof of the elements required by Congress. *Id.* at 453-54.

The same result should obtain here, and this Court should not countenance the Federal Circuit's unjustified, policy-driven expansion of section 271(c) liability beyond its text. Indeed, this Court has repeatedly intervened to correct the Federal Circuit's deviation from the plain language of statutes in the exercise of its exclusive jurisdiction. See *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 407 (2007) (granting certiorari because the Federal Circuit "addressed the question of obviousness in a manner contrary to § 103" of the Patent Act); *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 392 (2006) (rejecting Federal Circuit's presumptive-injunction rule for patent infringement because section 283 of the Patent Act provided that injunctive relief "'may' issue only 'in accordance with the principles of equity'" (quoting 35 U.S.C. § 283); *Merck KGaA v. Integra Lifesciences I, Ltd.*, 545 U.S. 193, 208 (2005) (rejecting Federal Circuit's "construction of § 271(e)(1) that was not consistent with the text of that provision"); *Asgrow Seed Co. v. Winterboer*, 513 U.S. 179, 192 (1995) (reversing Federal Circuit's construction of the Plant Variety Protection Act where there was "simply no way to derive from this text the narrower focus that the Federal Circuit applied").

B. The Federal Circuit's Rule Conflicts With Its Own Prior Precedent.

The Federal Circuit's "component" rule is irreconcilable not only with the plain language of the statute, but also with the Federal Circuit's own precedent. Cf. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 727-28 (2002) (granting

certiorari in part because of departure from prior Federal Circuit precedent).

In *Hodosh v. Block Drug Co.*, 833 F.2d 1575 (Fed. Cir. 1987), the patentee sued a manufacturer of potassium nitrate toothpaste for contributory infringement on the grounds that users of that toothpaste infringed its method patent for desensitizing teeth with a composition containing potassium nitrate. *Id.* at 1576. The defendant (Block) contested liability on the grounds that potassium nitrate was "a staple article or commodity of commerce suitable for substantial noninfringing use," 35 U.S.C. § 271(c). The question before the Federal Circuit was "whether courts, when making the staple/nonstaple determination, should look to the product actually sold or to a mere ingredient in that product." 833 F.2d at 1579. The *Hodosh* court ruled, in keeping with the plain language of the statute, that the noninfringing-use inquiry applied to the product actually sold:

Section 271(c) requires examination of the patented method only in determining whether the material the accused *actually sells* constitutes a material part of the invention and is known by the accused to be especially made or adapted for use in infringing the patent. Neither party here "sells" potassium nitrate, and Block's attempted limitation of the staple/nonstaple inquiry to that mere ingredient would eliminate the § 271(c)-mandated inquiries relating to whether *what was actually sold* was a material

part of the invention and whether the seller knew that *what was actually sold* was especially made or adapted for use in infringement of the patent.

Id. at 1578 (footnote omitted) (emphasis added).

The court below attempted to distinguish *Hodosh* as establishing a narrow rule: namely that "an otherwise *infringing* product may [not] automatically escape liability merely because it contains a *noninfringing* staple ingredient." App. 28a. But while that may describe the as-applied ruling in *Hodosh*, the statutory construction there is directly at odds with the construction adopted below. As the dissent stated: "The unmistakable holding of *Hodosh v. Block Drug Co., Inc.*, 833 F.2d 1575 (Fed. Cir. 1987), is that 'offers to sell or sells' in § 271(c) refers to 'the material the accused actually sells.'" App. 41a (Gajarsa, J., dissenting in part). Indeed, the *Hodosh* court broadly emphasized that "the focus of § 271(c) is on 'the thing sold,'" 833 F.2d at 1578 (quoting P.J. Federico, *Commentary on the New Patent Act*, 35 U.S.C.A. at 53 (1952)), and that "focus only on a mere ingredient (rather than on the material or product actually sold) ... would be in conflict with the statute," *id.* at 1580. The Federal Circuit has abandoned the *Hodosh* rule that contributory infringement under section 271(c) turns on whether "the product actually sold" has substantial noninfringing uses.

Similarly, the rule below is inconsistent with *AquaTex Industries Inc. v. Techniche Solutions*, 419 F.3d 1374 (Fed Cir. 2005). In *AquaTex*, the plaintiff asserted a method patent for cooling a person using a multi-layer blanket composed of absorbent fiber

material. The Federal Circuit rejected the district court's determination that contributory infringement would turn on whether the fiber component of the accused blanket (Vizorb®) had a substantial noninfringing use. After quoting the statute, the Federal Circuit declared:

From the record before us, the "apparatus for use in practicing" the claimed methods is Techniche's multi-layered product. The proper question is not whether Vizorb® is a staple article of commerce, which is readily apparent, but whether the accused Techniche products are "suitable for substantial noninfringing use[s]."

Id. at 1380 n.**. The Federal Circuit below refused to follow its prior rule that it is the apparatus for use in practicing the patented process (here, the disc drive) that is analyzed for substantial noninfringing uses.

Although circuit splits will not exist for issues within the Federal Circuit's exclusive jurisdiction, the presence of internal conflict within Federal Circuit precedent supports review. This Court should grant review to determine whether the rule below or the rule of *Hodosh* and *AquaTex* is correct.

C. The Federal Circuit's Rule Contravenes The Precedent Of This Court.

As the dissent declared, the Federal Circuit has "opt[ed] for an over-inclusive application of § 271(c) that directly contravenes Supreme Court guidance on how this section ought to be interpreted." App. 40a

(Gajarsa, J., dissenting in part). This Court has announced an "article in commerce" rule that is directly contrary to the Federal Circuit's newly minted "component" rule.

In *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005), this Court declared that contributory infringement under the patent laws depends on the uses of the "article in commerce" that the defendant sells or imports. The doctrine of contributory infringement "was devised to identify instances in which it may be *presumed from distribution of an article in commerce* that the distributor intended the article to be used to infringe another's patent, and so may justly be held liable for that infringement." *Id.* at 932 (emphasis added). Accordingly, "where *an article* is 'good for nothing else' but infringement, there is no legitimate public interest in its unlicensed availability, and there is no injustice in presuming or imputing an intent to infringe." *Id.* (citation omitted) (quoting *Canda v. Mich. Malleable Iron Co.*, 124 F. 486, 489 (6th Cir. 1903)). This rule "absolves the equivocal conduct of selling an item with substantial lawful as well as unlawful uses, and limits liability to instances of more acute fault than the mere understanding that some of one's products will be misused. It leaves breathing room for innovation and a vigorous commerce." *Id.* at 932-33.

This Court emphasized the same point in *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984). Noting "the critical importance of not allowing the patentee to extend his monopoly beyond the limits of his specific grant," the Court declared that its patent precedents "deny the

patentee any right to control the distribution of *unpatented articles* unless they are 'unsuited for any commercial noninfringing use.'" *Id.* at 441 (emphasis added) (quoting *Dawson Chem. Co. v. Rohm & Hass Co.*, 448 U.S. 176, 198 (1980)). Section 271(c) liability turns on the uses of the commodity of commerce because the public has a countervailing interest in using that commodity for noninfringing purposes; accordingly, "[u]nless a commodity 'has no use except through practice of the patented method,' the patentee has no right to claim that its distribution constitutes contributory infringement." *Id.* (emphasis added) (quoting *Dawson*, 448 U.S. at 198). "[A] sale of an article which though adapted to an infringing use is also adapted to other and lawful uses, is not enough to make the seller a contributory infringer. Such a rule would block the wheels of commerce." *Id.* (emphasis added) (quoting *Henry v. A.B. Dick Co.*, 224 U.S. 1, 48 (1912), overruled in part on other grounds by *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 517 (1917)). Thus, the Sony Court concluded, "the sale of ... articles of commerce[] does not constitute contributory infringement if the *product* is ... capable of substantial noninfringing uses." *Id.* at 442 (emphasis added).

The Federal Circuit attempted to sidestep *Grokster* and *Sony*, but to no avail. The Federal Circuit rejected the *Grokster/Sony* "article in commerce" rule because its "component rule" better served the purposes of section 271(c) identified in *Grokster*. App. 26a. The Federal Circuit claimed that the same statutory presumption of an intent to infringe is justified if any component of the article lacks a noninfringing use. *Id.*

Aside from the impropriety of departing from this Court's interpretation based on its own analysis of legislative purpose, the Federal Circuit misconceives the statutory scheme. Contributory infringement is a species of aiding and abetting. 5 Donald S. Chisum, *Chisum on Patents* § 17.02[1], at 17-5 to 17-6 (2005); *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 485-88 (1964) (“[A] contributory infringer is a species of joint-tortfeasor, who is held liable because he has contributed with another to the causing of a single harm to the plaintiff.”) Sections 271(b) and (c) codify the common law: section 271(b) recites “in broad terms that one who aids and abets an infringement is likewise an infringer,” whereas section 271(c) “is much more restricted than many proponents of contributory infringement believe should be the case.” S. Rep. No. 82-1979, at 8, 28 (1952), as reprinted in 1952 U.S.C.C.A.N. 2394, 2402. Under the latter, direct proof of specific intent is unnecessary because sale of an *article* that has no noninfringing uses necessarily aids and abets infringement by the user. But if the article has noninfringing uses (regardless of the uses of certain components), an intent to aid and abet infringement cannot be presumed. The patentee should be held to proving active inducement of any direct infringement under section 271(b). The Federal Circuit lacked both authority and a logical basis to depart from the “article in commerce” rule stated in *Grokster*.

The Federal Circuit likewise improperly dismissed the analysis in *Sony* because no claim was presented there that the allegedly infringing product “contained specialized, distinct components that could be used only to infringe.” App. 27a. But the fundamental point, as the dissent observed, is that

the Federal Circuit departed from the article-in-commerce rule and disregarded "the Supreme Court's rationale of contributory infringement that favors public access to unpatented goods." App. 44a (Gajarsa, J., dissenting in part). In any event, the vast expansion of contributory infringement liability occasioned by the Federal Circuit's modification of this Court's article-in-commerce rule is a reason to grant, not deny, the petition.

Finally, the Federal Circuit contravenes this Court's rule that section 271 should be narrowly construed. In *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972), this Court held that, because of "this Nation's historical antipathy to monopoly," the limitations on the exercise of patent rights under section 271 "are ... strictly enforced." *Id.* at 530-31 (quoting *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 230 (1964)). Not only is the Federal Circuit's "component" rule irreconcilable with the plain language of section 271(c), but an "argument for expansion of privilege [must be] based on more than mere inference from ambiguous statutory language." *Id.* at 531; see *id.* at 529-30 (rejecting call to avoid "too narrow and technical an interpretation of the statute" so as to promote patent protection, for "the sign of how far Congress has chosen to go can come only from Congress"); see also *Sony*, 464 U.S. at 430-31 ("Repeatedly, as new developments have occurred in this country, it has been the Congress that has fashioned the new rules that new technology made necessary."). This Court has properly construed section 271(c) narrowly to apply only to the sale or importation of articles in commerce that lack substantial noninfringing uses; it should grant this petition to vindicate its precedents.

D. The Surpassing Importance Of The Rule Below In The Pervasive-Computing Era Justifies This Court's Immediate Review.

As the National Academy of Sciences declared in 2001:

Information technology (IT) is on the verge of another revolution. Driven by the increasing capabilities and ever declining costs of computing and communications devices, IT is being embedded into a growing range of physical devices linked together through networks and will become ever more pervasive as the component technologies become smaller, faster, and cheaper.

National Academy of Sciences, *Embedded, Everywhere: A Research Agenda for Networked Systems of Embedded Computers*, Executive Summary, at 1 (2001), available at <http://books.nap.edu/catalog/10193.html> (last visited Mar. 26, 2009).

Advances in microprocessing power, networking, wireless and Bluetooth technologies, and the Internet have ushered in the age of "pervasive computing," in which vast numbers of consumer and industrial products contain computing and communications devices with hardware and software (or firmware) components. Myriad consumer electronics products (such as digital cameras and cellular phones), "smart" household appliances, heating and cooling systems, security systems, automobiles, medical devices, and industrial equipment and tools (among others) contain embedded computing components. See

Jonathan Sidener, *Automation Nation; America Races Toward A Don't-Do-It-Yourself Future*, San Diego Union-Tribune, Nov. 10, 2003, at E-1; James Truchard, *In 2008, Sensors Are Everywhere*, Embedded Systems Design, Nov. 17, 2008, at 27; *A World of Connections*, The Economist, Apr. 28, 2007 ("This year around 10 billion microprocessors will be sold, embedded in anything from computers to coffee-makers."). Complexity increases within a single product; "[a]n embedded device will no longer typically ... have 10,000 or 15,000 lines of assembly language; now there could be up to three million lines of code all interacting with the environment." *Trend Wars: Embedded Systems*, IEEE Concurrency, Oct. – Dec. 2000, at 80, 82.

The Federal Circuit's unwarranted expansion of contributory infringement liability has dramatic implications not just for technology and software companies but also for all manufacturers, distributors, and retailers of complex consumer and industrial products. Indeed, the Federal Circuit's avowed purpose is to ensure that that the patentee will have recourse under section 271(c) not only against component manufacturers – "the first person in the supply chain" – but also against downstream final-product manufacturers, distributors and retailers. App. 25a. As the dissent commented,

the majority's expansive interpretation of the phrase "offers to sell or sells" subjects not only Quanta to contributory infringement liability, but also Dell, HP and any other reseller of Quanta's drives ... even though their only activity is to sell an unpatented optical disc drive (or

even an entire computer system) that has multiple functions, only one of which is alleged to practice Ricoh's claimed methods.

App. 44a (Gajarsa, J., dissenting in part). Such "a rule that captures every seller in the chain of commerce for a given unpatented product ... would burden the wheels of commerce and would give undue regard to the limited monopoly of the patent statute at the expense of the public interests identified by the Supreme Court." App. 44a.

The Federal Circuit's rule creates undue legal uncertainty and risk for sellers and importers of complex products. Prior to the decision below, such entities were not at legal risk of section 271(c) liability so long as the products they actually sold had substantial noninfringing uses. And those claims that were brought could generally be resolved on summary judgment. Under the Federal Circuit's new "component" rule for method patents, the landscape has changed; if a plaintiff can find any hardware or software components for which there is a factual issue as to whether that component has a substantial noninfringing use, summary judgment can now be avoided. The settlement value of even insubstantial contributory infringement claims increases.

Moreover, the Federal Circuit's component rule places impossible burdens on business, given the multiplicity of parts of different manufacturers whose components are typically integrated into a single product. For example, the firmware residing on the chips in Quanta's disc drives is created by the chip manufacturer (as are the electronic circuits). App. 70a. The Federal Circuit's new "component" rule

puts the onus on the product manufacturer to examine all hardware or software components (out of potentially millions of lines of source code) to determine if any component lacks a noninfringing use. Moreover, firmware is a highly integrated functionality; one cannot simply delete firmware elements and have an operative product. It is impracticable for manufacturers to comply with the Federal Circuit's unreasonable rule.

A ruling that so dramatically shifts the balance between plaintiffs and defendants in patent infringement litigation is inherently worthy of this Court's review, even apart from the conflict with precedent and the Federal Circuit's disregard of the statutory language. It is particularly imperative that this Court grant review now. First, businesses require predictability of legal rules, and companies cannot measure their risk of infringement liability under the aberrant rule established below. Second, there is no benefit to delaying review until final judgment. If Ricoh prevails on its section 271(c) claim at trial, the factual posture of the case will be the same for purposes of this Court's review; the evidence regarding contributory infringement would be construed in Ricoh's favor after jury verdict, just as it is now. Moreover, if Quanta wins at trial, or if Ricoh prevails on alternative grounds (for example, on its section 271(b) inducement claim), the Federal Circuit's ruling on this critical issue of law will be insulated from review in this case, and its negative effects for the business community will continue unabated. Sellers or importers should not have to abide the business uncertainty that the Federal Circuit's rule creates.

CONCLUSION

Review is warranted here for the very same reasons that this Court granted review (and ultimately reversed the Federal Circuit) in *Microsoft*, *KSR*, and *eBay*: the court of appeals has once again disregarded express statutory limitations out of misplaced concerns for expanding the rights of patentees. The “component” rule the Federal Circuit fashioned below unjustifiably expands contributory infringement liability and prejudices “the public interest in access to ... article[s] of commerce” with substantial noninfringing uses. *Sony*, 464 U.S. at 440. The petition should be granted.

Respectfully submitted,

VINCENT K. YIP
TERRY D. GARNETT
PETER J. WIED
Paul, Hastings, Janofsky &
Walker LLP
515 South Flower St.
25th Floor
Los Angeles, CA 90071
(202) 683-6000

STEPHEN B. KINNAIRD
COUNSEL OF RECORD
IGOR V. TIMOFEYEV
TAMARA L. GRAHAM
Paul, Hastings, Janofsky &
Walker LLP
875 15th Street, N.W.
Washington, D.C. 20005
(202) 551-1700

Counsel for Petitioners

March 2009

APPENDIX

1a

APPENDIX A

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

No. 2007-1567

RICOH COMPANY, LTD.,
Plaintiff-Appellant,

v.

QUANTA COMPUTER INC., QUANTA STORAGE, INC.
QUANTA COMPUTER USA, INC.
and NU TECHNOLOGY, INC.,
Defendants-Appellees.

and

BUSINESS LINE DATA, PHILIPS OPTICAL STORAGE,
and PHILIPS TAIWAN, LTD.,
Defendants.

John C. Rozendaal, Kellogg, Huber, Hansen, Todd, of Washington, DC, argued for plaintiff-appellant. With him on the brief were Mark C. Hansen, Michael E. Joffre, Richard H. Stern. Of counsel on the brief was Ivan S. Kavrukov, Cooper & Dunham LLP, of New York, New York.

Terrence D. Garnett, Paul, Hastings, of Los Angeles, California, argued for Defendants-Appellees and Defendants. With him on the brief were Vincent K. Yip, Peter J. Weid, and Jay C. Chiu. Of counsel were Hua Chen, Daniel Prince, Todd Snyder, and Katherine F. Murray.

Appealed from: United States District Court for the Western District of Wisconsin

Chief Judge Barbara B. Crabb.

2a
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 2007-1567

RICOH COMPANY, LTD.,
Plaintiff-Appellant,

v.

QUANTA COMPUTER INC., QUANTA STORAGE, INC.
QUANTA COMPUTER USA, INC.
and NU TECHNOLOGY, INC.,
Defendants-Appellees.

and

BUSINESS LINE DATA, PHILIPS OPTICAL STORAGE
and PHILIPS TAIWAN, LTD.,
Defendants.

Appeal from the United States District Court for the
Western District of Wisconsin, No. 06-CV-0462,
Chief Judge Barbara B. Crabb.

December 23, 2008

Before GAJARSA, LINN, and DYK Circuit Judges.

PER CURIAM. Dissenting opinion filed by Circuit
Judge GAJARSA as to Section III B.

This is a patent infringement case. Plaintiff-appel-
lant Ricoh Company, Ltd. ("Rico") appeals from a
summary judgment dismissing all claims against

defendant-appellees Quanta Computer Inc. ("QCI"), Quanta Storage, Inc. ("QSI"), Quanta Computer USA, Inc. ("QCA"), and NU Technology, Inc. ("NU"). On summary judgment, the district court ruled that the asserted claims of U.S. Patent No. 6,631,109 ("the '109 patent") are invalid for obviousness; that the accused devices do not practice the methods of the asserted claims of U.S. Patent No. 6,172,955 ("the '955 patent"); and that Ricoh failed to present evidence sufficient to create a material issue of fact as to either direct or indirect infringement of U.S. Patent Nos. 5,063,552 ("the '552 patent") and 6,661,755 ("the '755 patent") by the defendant-appellees. *Ricoh Co. v. Quanta Computer, Inc.*, 579 F. Supp. 2d 1110 (W.D. Wisc. 2007) ("*Summary Judgment Order*"). Because the district court applied erroneous legal standards for assessing (1) whether Quanta contributorily infringed the '552 and '755 patents and (2) whether QSI induced infringement of the '552 and '755 patents, the district court's summary judgment of noninfringement is vacated on these issues. The remainder of the decision is affirmed in all respects.

BACKGROUND

The patents in suit are directed to various aspects of optical disc drive technology.¹ Recordable optical discs and disc drives (e.g., CD-R, DVD-R) allow a user to permanently record data, and rewritable optical discs and disc drives (e.g., CD-RW, DVD-RW) allow a user to record, erase, or overwrite data. Recording speeds are expressed as multiples of a nominal standard speed referred to as "1X speed." 1X speed cor-

¹ The asserted patents use both "disc" and "disk." For consistency, we use "disc" except where quoted material differs.

responds to a disc having a linear velocity of 1.2 to 1.4 meters per second ("m/s") relative to the laser beam, while a 4X speed corresponds to a linear velocity of 4.8 to 5.6 m/s.²

The '109 patent is directed to methods and apparatuses for generating a particular pulse sequence for recording information to a rewritable optical disc. '109 patent col.3 1.66 to col.4 1.30. Rewritable optical discs store information on a "phase change" material, usually a metal alloy. *Id.* at col.1 11.17-22. When writing, a rewritable optical disc drive can thus use a laser pulse sequence or write strategy to change the material from a relatively crystalline phase (having a more ordered atomic structure) to a relatively amorphous phase (having a more disordered atomic structure), and vice versa. *Id.* at col.2 11.8-15. When reading, the laser can detect these regions based on their different reflective properties.

The asserted method claims of the '109 patent cover a specific write strategy for making legible marks on phase-change optical discs over a wide range of disc speeds. Asserted claim 1 of the '109 patent states:

An optical recording method which records a sequence of data blocks onto a recording layer of an optical recording medium by emitting light to the recording layer of the medium and changing a phase of a recording material of the recording layer, comprising the steps of:

applying a light source driving power to a light

² A laser is used as the light source for reading and writing of optical discs. Linear velocity refers to the velocity at which a particular spot on the disc passes over the laser beam.

source to control emission of a light beam to the recording layer of the medium, the driving power including a sequence of mark and space portions, each mark portion having a pulse width that corresponds to a multiple of a period T of a write clock based on a write data modulation method;

setting a multi-pulse waveform of each mark portion of the driving power that includes a front-end portion, a multi-pulse portion and a tail-end portion, the front-end portion having a first pulse width t_1 with a high-power write level P_w and starting from a middle-power erase level P_e , the multi-pulse portion including a sequence of write pulses each having a second pulse width t_2 with the write level P_w and a third pulse width t_3 with a low-power base level P_b , the multi-pulse portion having a given duty ratio $z = t_2/(t_2 + t_3)$, and the tail-end portion having a fourth pulse width t_4 with the base level P_b and ending at the erase level P_e ;

setting a linear velocity of rotation of the medium at a controlled speed; and

controlling the waveform when the linear velocity of rotation of the medium is set in a high-speed range from 5 m/s to 28 m/s, such that the first pulse width t_1 of the front-end portion ranges $0.1T$ to $1T$ and the fourth pulse width t_4 of the tail-end portion ranges $0.2T$ to $1.3T$.

Id. at col.12 1.65 to col.13 1.28.

The '955 patent is directed to methods and apparatuses for formatting rewritable optical discs. '955 patent col.1 11.10-14. For certain types of recording modes, a rewritable disc must be formatted by dividing the recording area on the disc into fixed-sized

units, called packets. *Id.* at col.2 11.14-19. If formatting occurs as a foreground process, the optical disc drive is incapable of performing read or write commands during the formatting period. *Id.* at col.2 11.22-29. Thus, the '955 patent teaches formatting as a background process, such that the background formatting can be interrupted to carry out a read or write command. The optical disc drive employs background formatting by misinforming the host computer that it is not busy formatting, allowing the host computer to send read or write commands to the drive. *Id.* at col.4 11.20-24.

Asserted claim 8 of the '955 patent states:

A formatting method for formatting a rewritable optical disc, data being recorded on said optical disc by using a fixed packet write method, said formatting method comprising the steps of:

starting a formatting process for said optical disc as a background process, the formatting process being performed so as to fill a recording area of said optical disc by packets having a fixed length; enabling execution of at least one of a recording process and a reproducing process by interrupting the formatting process and resuming the formatting process after the at least one of the recording process and the reproducing process is ended; and

ending the formatting process after the recording area to be formatted has been filled by the packets having the fixed length.

'955 patent col.13 11.34-50.

The '552 patent is directed to an apparatus and method for controlling the velocity at which a disc drive spins an optical disc. Optical disc drives typi-

cally spin discs at either a constant angular velocity ("CAV") or a constant linear velocity ("CLV"). '552 patent col.1 11.19-24. In a CAV system, the disc completes the same number of revolutions per unit time, regardless of where on the disc the laser beam is positioned. *Id.* at col.1 11.25-38. In a CLV system, the linear velocity of the disc is constant relative to the laser beam, such that the disc is turning faster when the laser is near the center of the disc and slower when the laser is near the outer edge of the disc. *Id.* at col.1 11.39-46. The use of a CLV system increases the recording capacity of an optical disc but requires more complicated machinery in the optical disc drive. *Id.* at col.2 11.15-36. The invention of the '552 patent addresses this trade-off through the use of Zone-CLV. Zone-CLV, as claimed in the '552 patent, divides an optical disc into annular zones, wherein each zone is recorded at constant linear velocity, but different linear velocities are used for different zones. '552 patent col.3 11.5-68.

Asserted claim 1 of the '552 patent states:

A method for controlling an information recording and/or reproduction speed "f" and a rotation speed "n" of an optical disk used in an information recording and/or reproduction device, said optical disk having a plurality of tracks in the form of concentric circles or a spiral, said information recording and/or reproduction device being adapted to access said tracks by means of a light beam while rotating said optical disk, thereby to optically record information on or reproduce information from said tracks, said method comprising the steps of:

dividing said tracks into a plurality of concentric annular blocks which are different in radius from

each other;

changing said information recording and/or reproduction speed "f" in accordance with the radius of a track to be accessed in such a manner that said recording and/or reproduction speed "f" is constant within a block but different as between said blocks depending on the block radii; and

changing said rotation speed "n" of said optical disk in such a manner that $f/(n-r)$ is constant, where "r" is the radius of said track to be accessed.

'552 patent col.8 1.48 to col.9 1.3.

The '755 patent is directed to methods of writing data to optical discs in multiple sessions. '755 patent col.3 11.34-44. Optical disc drives typically store the data to be written to the optical disc in a temporary memory called the buffer. *Id.* at col.1 11.37-40. Many optical disc drives can write data to a disc faster than the data is received by the buffer, which can cause the buffer to go empty—a condition known as "buffer run." *Id.* at col.1 11.54-63. In addition, at the time the '755 patent application was filed, conventional disc drive technology necessitated that an entire disc or track be written in a single session. *Id.* at col.1 11.29-33. Buffer run could thus cause such a drive to write nonsense or dummy data to the disc, which could cause read errors or render the disc unusable. *Id.* at col. 1 11.47-52. The methods of the '755 patent solve this problem by allowing the write operation to pause when the buffer runs low, which ensures that no dummy data is recorded to the disc. *Id.* at col.2 11.62-67.

Asserted claim 1 of the '755 patent states:

A method of recording on an optical disc recording media, said method comprising the steps of:

transferring stored input information to an encoder;

transferring encoded information to a record circuit;

causing an input buffer to contain less than a threshold amount of said input information; and

when said input buffer contains less than the threshold amount of said input information, pausing said transferring of said encoded information, to stop said record circuit at a first point on said optical disk recording media while maintaining said encoded information; and

wherein said record circuit does not write any run-out blocks while paused.

'755 patent col.8 11.51-65.

Quanta Computer Inc. ("QCI") is a large manufacturer of notebook computers. QCI does not, however, sell notebooks directly to consumers. It is an original equipment manufacturer ("OEM") and sells its products to other companies for retail marketing. QCI is a one-third owner of Quanta Storage, Inc. ("QSI"), which manufactures optical disc drives. Like QCI, QSI is an OEM. It does not sell direct to consumers, but sells products such as optical disc drives to its U.S. customers, including NU Technologies, who in turn sell to consumers. QCI also owns more than ten percent of Quanta Computer USA, Inc. ("QCA"), which is a California company that repairs notebook computers for branded computer companies. QCI, QSI, and QCA are hereinafter collectively identified as "Quanta."

Ricoh filed suit against Quanta and NU, accusing them of directly and indirectly infringing each of the

patents in suit.³ On summary judgment, the district court ruled that (1) the asserted claims of the '109 patent are obvious; (2) the asserted claims of the '955 patent are not infringed; and (3) issues of material fact exist as to whether the accused devices perform the methods of the asserted claims of the '552 and '755 patents. *Summary Judgment Order*, 579 F. Supp. 2d at 1116, 1118, 1121, 1122. With respect to whether the '552 and '755 patents are infringed by Quanta and NU, the district court further ruled that (1) Quanta does not directly infringe under § 271(a) because it neither sells nor offers to sell the patented methods; (2) NU does not directly infringe under § 271(a) because Ricoh presented no evidence to show either that NU tested the accused devices or that the tests it did undertake were conducted in a manner practicing the asserted claims of these patents; (3) neither Quanta nor NU contributorily infringe under § 271(c) because all of the devices sold have substantial noninfringing uses; and (4) individually QSI⁴ does not actively induce infringement under § 271(b) because Ricoh failed to put forth evidence sufficient to create a material issue of fact as to QSI's intent. *Id.* at 1123-26. Accordingly, the court dismissed all of Ricoh's claims against Quanta and NU and entered a final judgment. Ricoh filed a timely notice of appeal, and we have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

³ Defendant-appellees Quanta and NU filed third-party indemnification claims against Philips Taiwan, Ltd., Philips Optical Storage, and Business Line Data. The district court dismissed these claims as moot upon the dismissal of Ricoh's claims against Defendant-appellees. *Summary Judgment Order*, 579 F. Supp. 2d at 1112.

⁴ Ricoh asserted a § 271(b) claim for active inducement against QSI only. *Summary Judgment Order*, 579 F. Supp. 2d at 1124-25.

DISCUSSION

Summary judgment is appropriate if "there is no genuine issue as to any material fact and . . . the movant is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c); *see also Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). A district court's grant of summary judgment is reviewed without deference, reapplying the same standard as the district court. *Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119, 1121 (Fed. Cir. 2003). "In deciding whether summary judgment was appropriate, we view the evidence in a light most favorable to the party opposing the motion with doubts resolved in favor of the opponent" *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998).

I. The '109 Patent

The district court ruled that claims 1 and 4 of the '109 patent are obvious over either of Ricoh's European Patent Nos. EP 0898272 ("EP '272") and EP 0737962 ("EP '962").⁵ Ricoh concedes that both patents disclose every limitation of claims 1 and 4—i.e., the identical laser pulse sequence or write strategy—except "when the linear velocity of rotation of the medium [e.g., an optical disc] is set in a high-speed range from 5 m/s to 28 m/s." *E.g.*, '109 patent col.13 11.24-26. However, the European patents expressly claim a method "capable of recording

⁵ Although the district court apparently relied on the European patents as issued, the court properly noted that the corresponding patent applications are the prior art to the '109 patent by virtue of their publication more than one year prior to the filing date of the '109 patent. In consonance with the district court's opinion, we herein cite to the patents as issued.

information at a linear speed in a range of 2.4 to 5.6 m/s." EP '272 p.16 11.49-50; EP '962 p.20 11.48-50. Because the range of recording speeds disclosed in the European patents overlaps the range claimed by the '109 patent, the parties do not dispute that the claims of the '109 patent are presumed obvious. See *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311 (Fed. Cir. 2006) ("Where a claimed range overlaps with a range disclosed in the prior art, there is a presumption of obviousness." (citing *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1322 (Fed. Cir. 2004); *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997))). This presumption, however, "can be rebutted if it can be shown that the prior art teaches away from the claimed range, or the claimed range produces new and unexpected results." *Id.* at 1311 (citations omitted). The district court rejected Ricoh's expert testimony offered to rebut the presumption, reasoning that "plaintiff . . . fails to explain how the prior art 'teaches away' from its '109 patent or how the '109 patent provides 'new and unexpected results.'" *Summary Judgment Order*, 579 F. Supp. 2d at 1115. We agree.

On appeal, Ricoh attempts to rebut the prima facie obviousness of claims 1 and 4 of the '109 patent by purportedly making separate arguments that EP '272 and EP '962 teach away from the range of recording speeds claimed by the '109 patent and that the range of the recording speeds claimed by the '109 patent produces unexpected results in view of the teachings of EP '272 and EP '962. Both arguments, however, stem from a single teaching in EP '272:

when the "recrystallization upper-limit linear speed" of the recording layer exceeds 5.0 m/s, the recording layer cannot assume a complete

amorphous state when information is written therein. Thus, satisfactory signal properties cannot be obtained.

EP '272 p.7 11.2-4. In its briefing to this court, Ricoh thus argues that EP '272 "specifically states that its write strategy does not work at speeds above 5.0 m/s."

Ricoh's arguments as to the teachings of EP '272 are inapposite because the recrystallization upper speed limit, as defined by EP '272, is unrelated to the effectiveness, at any speed, of the write strategy disclosed therein. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *Optivus Tech., Inc. v. Ion Beam Applications S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (quoting *In re Kahn*, 441 F.3d 977, 990 (Fed. Cir. 2006)); see also *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (refusing to conclude that prior art disclosure taught away from the claimed invention where the disclosure did not "criticize, discredit, or otherwise discourage the solution claimed"). Here, EP '272 teaches that the recrystallization upper-limit linear speed is a physical characteristic of the particular phase change media—i.e., optical discs having a specific composition—disclosed therein. EP '272 p.6 11.7-9 (stating that the "recrystallization upper-limit linear speed" of the recording layer of the optical recording medium is a novel value for characterizing the recording medium, which was discovered by the inventors of the present invention"). This physical characteristic establishes an upper limit to the speed at which the phase change material of the optical disc can be

recrystallized. EP '272 p.6 11.3-4 (defining recrystallization upper-limit linear speed as "an upper limit linear speed of a light beam which scans the recording layer at which the recording layer can be recrystallized after being fused with the application of the light beam thereto, and then cooled and recrystallized"). In contrast, the asserted method claims of the '109 patent are write strategies comprising a specified sequence of laser pulses, not limited to use on a particular phase change medium. Ricoh offers no explanation as to why EP '272's teaching of a particular type of medium limited to use below 5.0 m/s would criticize, discredit, or otherwise discourage a person of ordinary skill from using the write strategy of EP '272 at speeds beyond 5.6 m/s (the upper limit claimed by EP '272) when writing to optical media not limited to use below a speed of 5.0 m/s. Accordingly, there is no genuine issue of material fact that EP '272 does not teach away from using its disclosed write strategy, which is the same write strategy claimed in the '109 patent, in a high-speed range from 5 m/s to 28 m/s.

Ricoh relies on this same "teaching away" to support its assertions that the linear speed range of 5 m/s to 28 m/s claimed in the '109 patent is an unexpected result over the teachings of EP '272. As noted by Ricoh, *Ormco* does teach that the presumption of obviousness can be rebutted if "the claimed range *produces* new and unexpected results," 463 F.3d at 1311 (emphasis added), but Ricoh argues that the claimed range *is* the new and unexpected result. In this case, Ricoh does not dispute that EP '272 discloses every limitation of claims 1 and 4 of the '109 patent other than the aforementioned linear speed range of the optical medium relative to the laser executing the claimed write strategy. Rather, Ricoh attempts to argue that

increasing the linear speed of the optical medium in the '109 patent is somehow an unexpected improvement over the write strategy disclosed in EP '272, even though Ricoh does not argue that the write strategy differs in any way between the two patents. To the extent that Ricoh has discovered that its previously disclosed write strategy is useful in a higher linear speed range than initially recognized, Ricoh may be free to claim a method executed at this higher speed unless that method is obvious over EP '272. See, e.g., 35 U.S.C. § 100(b) (stating that the term "process" includes "a new use of a known process"). However, the mere understanding that the write strategy of the '109 patent and EP '272 is useful in a faster but overlapping linear speed range is not the type of result that can rebut a prima facie case of obviousness arising from the overlapping ranges. Such development of the prior art is the quintessence of "ordinary skill" or "ordinary skill and common sense" rather than patentable innovation. Cf. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007). We therefore affirm the judgment of the district court.

II. The '955 Patent

Each of asserted claims 8-12 of the '955 patent requires the step of "starting a formatting process for said optical disc as a background process." E.g., '955 patent col.13 11.21-22. The parties agree that a background process, as that term is used in the '955 patent, differs from a foreground process in that a background process "can be interrupted at any time to allow another, higher priority process to be performed." *Summary Judgment Order*, 579 F. Supp. 2d at 1117. The district court examined the evidence and concluded that Ricoh had presented no evidence of any process in the accused devices that starts as a

background process. Accordingly, the district court granted summary judgment of noninfringement as to all asserted claims of the '955 patent because none of the accused devices starts a formatting process of an optical disc as a background process. *Id.* at 1118. On appeal, Ricoh argues that the district court mistakenly read the claims as requiring that the formatting process for the entire optical disc must start as a background process. It is Ricoh, however, that has mistakenly read the district court's opinion.

Infringement of a method claim "occurs when a party performs all of the steps of the process," *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1379 (Fed. Cir. 2007), and Ricoh reads the district court's opinion as improperly applying this standard. In particular, Ricoh argues that the use of "comprising" in the preamble, plus the indefinite article "a" to introduce "a formatting process," indicates that an accused formatting method with one or more additional foreground steps may infringe the claims of the '955 patent as long as at least one process begins as a background process. Although the use of "comprising" in a claim's preamble "raises a presumption that the list of elements is nonexclusive," the enumerated steps of a method claim must nevertheless "all be practiced as recited in the claim for a process to infringe." *Dippin' Dots, Inc. v. Mosey*, 476 F.3d 1337, 1343 (Fed. Cir. 2007). Accordingly, even under Ricoh's analysis, the process alleged to meet the background process limitation of claims 8-12 of the '955 patent must itself originate as a background process.

In this case, the district court found that the only evidence Ricoh presented of infringement of the '955 patent was two tests that Ricoh conducted. In both tests, an optical disc drive started formatting the disc

as a foreground process and later switched the formatting to a background process. *Summary Judgment Order*, 579 F. Supp. 2d at 1116-18. Importantly, Ricoh presented no evidence that the formatting process occurring in the background was a different process than the process that started as a foreground process. That is, the district court ruled that Ricoh had presented no evidence that any process started as a background process. *Id.* at 1117-18. Before this court, Ricoh similarly fails to cite a single piece of evidence to suggest that the accused devices use two separate formatting processes, one of which starts in the foreground and the other of which starts in the background. Accordingly, we conclude, as did the district court, that Ricoh has failed to present evidence to create a material issue of fact as to infringement of the '955 patent.

III. The '552 and '755 Patents

As to both the '552 and the '755 patents, the district court ruled that there are material issues of fact with respect to whether the accused devices practice the methods of the asserted claims. *Summary Judgment Order*, 579 F. Supp. 2d at 1121, 1122. Nevertheless, the district court dismissed Ricoh's claims of infringement of the '552 and '755 patents against each of Quanta and NU, ruling that Ricoh had failed to create material issues of fact as to direct or indirect infringement under the provisions of 35 U.S.C. § 271(a)-(c). Ricoh appeals on the grounds that the district court both misinterpreted and misapplied the statute.

A. Direct Infringement

We first turn to Ricoh's claims that Quanta directly infringed the '552 and '755 patents through the sale or offer for sale of software that causes the accused

drives to perform the claimed methods. The district court ruled that: “[b]ecause the claims asserted in the ’552 patent and the ’755 patent disclose *methods* for writing and recording rather [than] an actual device, to prove direct infringement, it is not enough for plaintiff to show a sale or offer to sell of an accused device.” *Id.* at 1123 (citing *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1321 (Fed. Cir. 2005)). In support of this reading of *NTP*, the district court relied on this court’s opinion in *Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770, 773 (Fed. Cir. 1993), which stated that “[t]he law is unequivocal that the sale of equipment to perform a process is not a sale of the process within the meaning of section 271(a).” Nevertheless, Ricoh argues that the sale of a method can be distinguished from the sale of an optical drive practicing the method because the software instructions that control the drive can be separated from the hardware that actually carries out those instructions. Because *NTP* explicitly did not decide the question of whether a “method claim may not be infringed under the ‘sells’ and ‘offers to sell’ prongs of section 271(a),” 418 F.3d at 1320-21, Ricoh invites this court to provide an answer and hold that a party may directly infringe a method claim under 35 U.S.C. § 271(a) by offering to include patented methods in software sold as part of the accused devices.

The answer lies in the language of the statute, and we therefore begin with its text. Section 271(a) of Title 35 sets forth the requirements of a claim of direct patent infringement: “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes

the patent.” Ricoh thus argues that the issue in this case is whether “any patented invention” includes “process,” such that a party who sells or offers to sell a patented process infringes the patent. As did the court in *NTP*, we conclude that we need not definitively answer this question to conclude as a matter of law that Quanta did not sell or offer to sell the invention covered by Ricoh’s method claims.

In this case, Ricoh has mistakenly confused software with a process as that term has been interpreted by this court. As the court in *NTP* recognized, “a process is nothing more than the sequence of actions of which it is comprised.” 418 F.3d at 1318. This court has also stated that a process “consists of doing something, and therefore has to be carried out or performed.” *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002). In contrast, software is not itself a sequence of actions, but rather it is a set of instructions that directs hardware to perform a sequence of actions. See *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746, 1754 (2007) (recognizing that software is “the ‘set of instructions, known as code, that directs a computer to perform specified functions or operations’” (quoting *Fantasy Sports Props., Inc. v. Sportsline.com, Inc.*, 287 F.3d 1108, 1118 (Fed. Cir. 2002))); *Microsoft Computer Dictionary* 489 (5th ed. 2002) (defining “software” as “[c]omputer programs; instructions that make hardware work.”); Alan Freedman, *The Computer Glossary* (9th ed. 2001) (defining “software” as “[i]nstructions for the computer.”). Despite its arguments on appeal, Ricoh itself impliedly acknowledges the distinction between a process and instructions to perform a process in its statements to this court—“the software instructions that control Quanta’s drives can be separated from the hardware that actually carries out those instructions.” Appellant’s Br. at 41.

The cases noted here make clear that the actual carrying out of the instructions is that which constitutes a process within the meaning of § 271(a). With this understanding of "process" in mind, we agree with the reasoning of *NTP* that the application of the concept of a sale or offer of sale to the actual carrying out of a sequence of actions is ambiguous. 418 F.3d at 1319 ("[A] process is a series of acts, and the concept of sale as applied to those acts is ambiguous." (quoting *Minton v. Nat'l Ass'n of Sec. Dealers, Inc.*, 336 F.3d 1373, 1378 (Fed. Cir. 2003))). Indeed, the Supreme Court recently recognized that "a patented method may not be sold in the same way as an article or device." *Quanta Computer, Inc. v. LG Elecs., Inc.*, 128 S. Ct., 2109, 2117 (2008) (holding that despite this difference, the doctrine of patent exhaustion applied to method claims upon the authorized sale of a device embodying those claims). However, because the allegedly infringing sale in this case was the sale of software (i.e., instructions to perform a process rather than the performance of the process itself), we need not determine whether a process may ever be sold so as to give rise to liability under § 271(a). Accordingly, we hold that a party that sells or offers to sell software containing instructions to perform a patented method does not infringe the patent under § 271(a). *Cf. Microsoft*, 127 S. Ct. at 1753-55 (holding that as a set of instructions, software is not a component of a patented device within the meaning of § 271(f) until it is reduced to a machine-readable copy).

We next turn to Ricoh's § 271(a) claims against NU. Ricoh alleges that NU directly infringed the '552 and '755 patents by testing the accused devices upon receipt from Quanta. The district court ruled that

Ricoh “failed to adduce any specific evidence that [NU] tested any of the products accused of infringing the ’755 and ’552 patents or that it tested them in a way that would constitute infringement.” *Summary Judgment Order*, 579 F. Supp. 2d at 1123. On appeal, Ricoh argues that the district court mischaracterized the evidence against NU in two respects. First, Ricoh takes issue with the district court’s conclusion that NU merely “tests *some* of its products, not all of them.” Second, Ricoh argues that it presented evidence sufficient to create material issues of fact as to whether NU’s tests were conducted in a manner that infringed the ’552 and ’755 patents. At the summary judgment phase, the “party with the burden of proof on an issue must ‘provide evidence sufficient, if unopposed, to prevail as a matter of law.’” *L&W, Inc. v. Shertech, Inc.*, 471 F.3d 1311, 1318 (Fed. Cir. 2006) (quoting *Saab Cars USA, Inc. v. United States*, 434 F.3d 1359, 1369 (Fed. Cir. 2006)). After reviewing the deposition testimony of NU’s Rule 30(b)(6) witness, we agree with the district court that Ricoh has failed to put forth evidence sufficient to create a material issue of fact as to direct infringement of the ’552 and ’755 patents by NU.

B. Contributory Infringement

We now turn to Ricoh’s arguments that Quanta contributorily infringed the ’552 and ’755 patents by selling optical disc drives adapted to perform the patented recording methods. The district court held that even though Quanta’s drives might be capable of being used to infringe Ricoh’s patented processes by writing discs, there was no liability for contributory infringement because the drives were also capable of “substantial noninfringing use” within the meaning of § 271(c) because they could also be used to read

discs in a noninfringing manner. *Summary Judgment Order*, 579 F. Supp. 2d at 1123-24. This is so, the district court held, even though it apparently assumed that the evidence, viewed in the light most favorable to Ricoh, indicated that Quanta's drives use separate hardware and embedded software modules to perform the patented processes and that those components had no noninfringing use. For purposes of this appeal, we must accept as true Ricoh's evidence that Quanta's drives contain at least some distinct and separate components used only to perform the allegedly infringing write methods. In this posture, this case thus presents an important, and previously unresolved, question concerning the scope of liability for contributory infringement, the construction of § 271(c), and the interpretation of the Supreme Court's decisions in *Sony Corporation of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984), and *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005).

The doctrine of contributory infringement long predated the enactment of § 271(c). See, e.g., *Wallace v. Holmes*, 29 F. Cas. 74, 80 (No. 17,100) (C.C.D. Conn. 1871) (holding that the sale of an unpatented burner component intended for use in a patented lamp combination contributorily infringed); see also *Aro Mfg. Co., Inc. v. Convertible Top Replacement Co., Inc.*, 377 U.S. 476, 485-88 & n.6 (1963). Enacted as part of the Patent Act of 1952, § 271(c) was designed to codify the contributory infringement doctrine "that previously had been developed by the judiciary." *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 179 (1980).⁶ Section 271(c) provides:

⁶ Although in *Mercoird Corp. v. Mid-Continent Investment Co.*, 320 U.S. 661 (1944), the Supreme Court cast doubt on the con-

Whoever offers to sell or sells within the United States or imports into the United States a *component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process*, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, *and not a staple article or commodity of commerce suitable for substantial noninfringing use*, shall be liable as a contributory infringer.

(emphasis added). The language of the statute incorporates the core notion that one who sells a component especially designed for use in a patented invention may be liable as a contributory infringer, provided that the component is not a staple article of commerce suitable for substantial noninfringing use. As aptly summarized in the House Judiciary Committee report accompanying the enactment of § 271(c), providing liability for contributory infringement reflects that "[o]ne who makes a special device constituting the heart of a patented machine and supplies it to others with directions (specific or implied) to complete the machine is obviously appropriating the benefit of the patented invention." H.R. Rep. No. 82-1923, at 9 (1952). The statutory language "offers to sell or sells . . . or imports into the United States" applies not only to the bare sale of an

tinued existence of the contributory liability doctrine, § 271(c) was enacted "for the express purpose of reinstating the doctrine of contributory infringement as it had been developed by decisions prior to *Mercoid*, and of overruling any blanket invalidation of the doctrine that could be found in the *Mercoid* opinions." *Aro Mfg.*, 377 U.S. at 492.

infringing component, but also to the sale of that component as part of a product or device.

It appears to be undisputed that, assuming direct infringement is found, Quanta would be liable under § 271(c) if it imported into or sold within the United States a bare component (say, a microcontroller containing routines to execute the patented methods) that had no use other than practicing the methods of the '552 and '755 patents. Such a component, specially adapted for use in the patented process and with no substantial noninfringing use, would plainly be "good for nothing else" but infringement of the patented process. *Grokster*, 545 U.S. at 932 (internal quotation marks omitted).

It thus follows that Quanta should not be permitted to escape liability as a contributory infringer merely by embedding that microcontroller in a larger product with some additional, separable feature before importing and selling it. If we were to hold otherwise, then so long as the resulting product, as a whole, has a substantial non-infringing use *based solely on the additional feature*, no contributory liability would exist despite the presence of a component that, if sold alone, plainly would incur liability.⁷

⁷ Ricoh offers a useful illustration of this arbitrary result in its brief. Consider a hypothetical patented method of using an answering machine to take messages. If a manufacturer of an infringing answering machine sells two versions of the device, a stand-alone version and a version with a built-in telephone, consumers directly infringe when they use either to carry out the patented message-taking method. Under the dissent's logic, however, the manufacturer would only incur contributory liability for the stand-alone answering machine, and not for the version that is identical but for the addition of a telephone.

Under such a rule, evasion of the protection intended by Congress in enacting § 271(c) would become rather easy. A competitor who wished to sell hardware that would enable infringement of a patented process could do so without incurring liability for contributory infringement by selling a device that simply embedded the hardware for practicing the patented process within other hardware that also performs another process, or by combining the enabling hardware with other hardware before importing it. Moreover, only the first person in the supply chain (in the example above, the manufacturer who sells the microcontroller) could be liable for contributory infringement. The person who bought that infringing component and assembled it into something else would face no liability for contributory infringement, even if that component were good for nothing but infringement. And most importantly, no § 271(c) liability could ever be found where an infringing component is both manufactured *and* assembled into something else by the same person. In many of these situations, the only remedy would be against end users of the product for direct infringement. This result would be contrary to what the Supreme Court recognized in *Grokster* as a fundamental purpose of contributory infringement liability: because "it may be impossible to enforce rights in the protected work effectively against all direct infringers, the only practical alternative [is] to go against the distributor of the copying device for secondary liability." *Grokster*, 545 U.S. at 929-30.

Nothing in the Supreme Court's decisions in *Grokster* or *Sony* requires the result the dissent would reach today, and much counsels against it. While both of those cases involved contributory infringement under copyright rather than patent law, the

principles are generally the same. First, in *Grokster*, the more recent decision of the two, the Court was faced with a contributory infringement claim against the makers of peer-to-peer file sharing software that was widely used to distribute and obtain copyrighted musical works in an infringing manner. 545 U.S. at 919-24. Pertinent to the present question, the Court explained that the staple article of commerce doctrine codified in § 271(c) "was devised to identify instances in which it may be presumed from distribution of an article in commerce that the distributor intended the article to be used to infringe another's patent, and so may justly be held liable for that infringement." *Id.* While this presumption is fully justified by the sale of an item that can be used only to infringe, the "equivocal conduct of selling an item with substantial lawful as well as unlawful uses" does not give rise to the same presumption of an intent to infringe. *Id.* at 932.

The *Grokster* Court thus made clear that the purpose of the "substantial noninfringing use" exception of § 271(c) is to allow determination of instances where the intent to infringe may be presumed based on the distribution of a product that has an unlawful use. *Id.* at 932-33. When a manufacturer includes in its product a component that can *only* infringe, the inference that infringement is intended is unavoidable. While selling a potentially infringing product where each component part thereof has a substantial lawful use may well be "equivocal," *id.* at 932, it is entirely appropriate to presume that one who sells a product containing a component that has no substantial noninfringing use in that product does so with the intent that the component will be used to infringe. We are unable to read *Grokster* as suggesting that Congress intended § 271(c) to eliminate this presumption in such cases where an infringing

component is bundled together with something else.

Second, the noninfringing use analysis of *Sony* simply does not speak to these facts. In *Sony*, the Supreme Court considered whether a manufacturer of video cassette recorders could be held liable for contributory infringement when the VCRs were used by consumers to record copyrighted works in an infringing manner. 464 U.S. at 419-21. Concluding that the VCRs at issue were capable of and widely used for noninfringing private time-shifting (that is, recording a television program to watch later), a substantial noninfringing use, the Court held that sale of the VCRs to the public did not constitute contributory infringement of the plaintiffs' copyrights. *Id.* at 456.

Nowhere in the *Sony* opinion is it suggested that the VCRs accused of contributing to infringement contained specialized, distinct components that could be used *only* to infringe. The accused VCR could be used in two ways: to infringe a copyright by building a "library" of broadcast movies, or in a substantial, noninfringing way to "time-shift" a program for later viewing or to record an uncopyrighted program. See *id.* at 443-446. Critically, the same tuner and recording features of the VCR would be employed for *either* the infringing or the noninfringing use. Unlike the disputed facts of the present case (as Ricoh presented them in response to a motion for summary judgment), the *Sony* VCRs did not have recording components that could *only* be used to infringe and separable, distinct playback components that did not infringe. Thus, the *Sony* Court simply had no occasion to address the question at issue here. We are unable to read *Sony* or *Grokster* as requiring the court to ignore the sale of a separable, distinct infringing component because it is bundled together

with a noninfringing component before being distributed.

Similarly, the dissent's reliance on *Hodosh v. Block Drug Co.*, 833 F.2d 1575 (Fed. Cir. 1987), in considering only whether the Quanta drives "as sold" are capable of substantial noninfringing use is misplaced. In *Hodosh*, the plaintiff held a process patent on a method of desensitizing teeth with a composition containing potassium nitrate and sued a manufacturer of potassium nitrate toothpaste for contributory infringement. *Id.* at 1576. Although the accused toothpaste containing potassium nitrate did not itself directly infringe Hodosh's method patent, customers undisputedly did so when using the paste to desensitize their teeth. *Id.* at 1576-77. As is relevant here, the alleged infringer argued that the focus of the § 271(c) substantial noninfringing use inquiry should be on the ingredient potassium nitrate, which was admittedly a staple article of commerce with numerous noninfringing uses, rather than on the toothpaste as a whole. *Id.* at 1578. We stated in *Hodosh* that the focus of the § 271(c) inquiry should be on the toothpaste as "what was actually sold," *id.*, which the dissent understands as compelling a determination of whether Quanta's *entire drive* "as sold" has substantial noninfringing uses. But this reading of *Hodosh* divorces the court's holding from the facts upon which it was rendered. In focusing on "what was actually sold," the *Hodosh* court rejected the argument that an otherwise *infringing* product may automatically escape liability merely because it contains a *noninfringing* staple ingredient. *Id.* at 1578; *see also id.* at 1579 ("At trial, for example, the toothpaste containing potassium nitrate may be shown . . . to

have a far narrower range of noninfringing uses (if any) than that of potassium nitrate or pure toothpaste alone.”). The dissent here would do what *Hodosh* forbade: it would insulate an infringing item by focusing only on its noninfringing component. It does not follow from *Hodosh* that the inclusion of a component with substantial noninfringing uses in a product that contains *other* components useful only to infringe a process patent can or should defeat liability for contributory infringement under § 271(c). As is the case with *Sony* and *Grokster*, the question before us was neither present nor decided in *Hodosh*.

Finally, the potential for induced infringement liability in these situations is not a practical substitute for contributory infringement liability. Unlike contributory infringement, induced infringement liability under § 271(b) requires proof that “the inducer [has] an affirmative intent to cause direct infringement.” *DSU Med. Corp. v. JMS Co., Ltd.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (en banc as to section III.B); *see also Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 668 (Fed. Cir. 1988) (Section 271(b) requires inducer to have “actively and knowingly aid[ed] and abett[ed] another’s direct infringement.” (emphasis omitted)). The Supreme Court in *Grokster* addressed the relationship between contributory and induced infringement. The Court made clear that the sale of a product with substantial noninfringing uses is within a “safe harbor” for purposes of contributory infringement. The sale of such a “safe harbor” product in and of itself cannot establish induced infringement. Rather, the copyright owner or patentee must show other “statements or actions directed to promoting infringement.” *Grokster*, 545 U.S. at 935. As discussed below, it may or may not be the case here that Quanta has taken such acts directed at promoting the infringing

use of its drives (such as advertising their infringing writing capability or providing instruction as to infringing use), and thus shown an intent to induce infringement. But it is incorrect to conclude as a general matter that § 271(b) will provide a sufficient substitute for liability for the sale of an infringing component under § 271(c).

We thus vacate the district court's grant of summary judgment of no contributory infringement and remand to the district court for further proceedings on the material issue of fact of whether Quanta's optical disc drives contain hardware or software components that have no substantial noninfringing use other than to practice Ricoh's claimed methods, in which case contributory infringement may appropriately be found.

C. Active Inducement

Finally, we consider Ricoh's claim that QSI actively induces infringement under 35 U.S.C. § 271(b), which states that "[w]hoever actively induces infringement of a patent shall be liable as an infringer." Specifically, Ricoh claims that QSI induced infringement by its customers (e.g., Hewlett-Packard, Dell, and Gateway) as well as the end-users of the drives. The district court granted summary judgment of no inducement on the grounds that Ricoh had not presented evidence sufficient to create a material issue of fact as to whether QSI possessed the requisite intent that the patents be infringed. *Summary Judgment Order*, 579 F. Supp. 2d at 1124-26. The district court considered several types of evidence of QSI's intent—including QSI's product specification sheets, the fact that QSI fine tunes the firmware⁸ used by the

⁸ "Firmware" refers to the software stored on the chips in

accused drives for writing to optical discs using Zone-CLV, a presentation that QSI gave to Dell, website instructions, and “the simple fact that defendant Quanta Storage ‘designs and sells’ the accused devices”—and concluded that this evidence may establish that QSI “may have known that its customers would perform the patented methods, but plaintiff adduces no evidence that Quanta encouraged infringement by its customers.” *Id.* at 1125-26.

In its analysis, the court cited the law of this circuit that “[a]ctively inducing, like facilitating, requires an affirmative act of some kind.” *Id.* at 1125 (quoting *Tegal Corp. v. Tokyo Electron Co.*, 248 F.3d 1376, 1379 (Fed. Cir. 2001)). The court then reasoned that a finding of inducement requires that the identified affirmative acts be communicated in some fashion to the alleged direct infringer. *E.g., id.* at 1125 (“Although defendant Quanta ‘fine tunes’ the firmware with respect to [Zone CLV], plaintiff adduces no evidence that customers are informed of this, so it is not clear how this could encourage the customer to do anything.”). The court also relied on the proposition that the “sale of lawful product by lawful means, with the knowledge that an unaffiliated, third party may infringe, cannot, in and of itself, constitute inducement of infringement.” *Id.* at 1122 (quoting *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1276 n.6 (Fed. Cir. 2004)). For the reasons stated below, we conclude that the district court’s reasoning was an incorrect application of the law of active inducement.

Initially, we note that a finding of inducement

QSI’s optical disc drives. *Summary Judgment Order*, 579 F. Supp. 2d at 1122.

requires a threshold finding of direct infringement—either a finding of specific instances of direct infringement or a finding that the accused products necessarily infringe. *ACCO Brands, Inc. v. ABA Locks Mfrs. Co.*, 501 F.3d 1307, 1313 (Fed. Cir. 2007); *Dynacore*, 363 F.3d at 1275-76. However, the district court found that material issues of fact exist as to whether and to what extent direct infringement occurs during the normal use of Quanta drives. *Summary Judgment Order*, 579 F. Supp. 2d at 1122. On this record, we therefore reject Quanta's argument that the district court's summary judgment of no inducement can be affirmed on the alternative basis that Ricoh has failed to make the requisite showing of direct infringement.

The issue before us is whether Ricoh has introduced evidence sufficient to create a material issue of fact as to Quanta's intent that its drives be used to infringe the method claims of the '552 and '755 patents. Again, we turn to *Grokster* and its analysis of the law of active inducement. The Supreme Court began from the premise that when an article is suitable for substantial noninfringing use, an evidentiary showing that the defendant intended that the article be used for direct infringement is required. *Grokster*, 545 U.S. at 935. Specifically, liability for active inducement may be found "where evidence goes beyond a product's characteristics or the knowledge that it may be put to infringing uses, and shows statements or actions directed to promoting infringement." *Id.* & n.10 (stating that this reasoning applies to § 271(b)).

Evidence of active steps . . . taken to encourage direct infringement, such as advertising an infringing use or instructing how to engage in an

infringing use, show an affirmative intent that the product be used to infringe, and a showing that infringement was encouraged overcomes the law's reluctance to find liability when a defen-

dant merely sells a commercial product suitable for some lawful use.

Id. at 936 (internal quotation marks and citation omitted). Of particular import to this case, the Court then examined whether a showing of intent required evidence that the accused indirect infringer successfully communicated a message of encouragement to the alleged direct infringer and concluded that such a communication is not necessary:

Whether the messages were communicated is not to the point on this record. The function of the message in the theory of inducement is to prove by a defendant's own statements that his unlawful purpose disqualifies him from claiming protection (and incidentally to point to actual violators likely to be found among those who hear or read the message). Proving that a message was sent out, then, is the preeminent but not exclusive way of showing that active steps were taken with the purpose of bringing about infringing acts, and of showing that infringing acts took place by using the device distributed.

Id. at 938 (citation omitted). Accordingly, the district court erred to the extent that it discounted Ricoh's evidence of QSI's intent as failing to present evidence that QSI communicated the nature of its actions to alleged direct infringers.

Similarly, the court erred in discounting evidence

that QSI made a presentation to Dell, which touted the advantages of the Quanta drives, on the grounds that the presentation disclosed an algorithm rather than one of the claimed methods. The potential relevance of the presentation is two-fold. First, the presentation is relevant to the extent it indicates QSI possessed the requisite intent that its drives be used to perform the infringing methods. Second, the presentation is relevant to the issue of whether it encouraged Dell to use the drives in an infringing manner. That the presentation may have failed to communicate any information regarding the patented methods or the possibility of infringement does not render it irrelevant as evidence of QSI's intent.

We further conclude that the district court incorrectly analyzed other circumstantial evidence presented by Ricoh in this case. In *DSU Medical Corp. v. JMS Co.*, this court explicitly relied on *Grokster* to clarify that specific intent to cause infringement is required for a finding of active inducement:

It must be established that the defendant possessed specific intent to encourage another's infringement and not merely that the defendant had knowledge of the acts alleged to constitute inducement. The plaintiff has the burden of showing that the alleged infringer's actions induced infringing acts *and* that he knew or should have known his actions would induce actual infringements.

471 F.3d 1293, 1306 (Fed. Cir. 2006) (en banc as to Section III.B) (emphasis in original) (quoting *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 553 (Fed. Cir. 1990)). *DSU Medical* further relied on *Grokster* to reaffirm the sufficiency of circumstantial evidence to prove specific intent. *Id.* ("While proof of

intent is necessary, direct evidence is not required; rather, circumstantial evidence may suffice.” (quoting *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 668 (Fed. Cir. 1988))). Moreover, both *DSU Medical* and *Grokster* relied on prior decisions of this court establishing that specific intent may be inferred from circumstantial evidence where a defendant has both knowledge of the patent and specific intent to cause the acts constituting infringement. See *MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp.*, 420 F.3d 1369, 1378 n.4 (Fed. Cir. 2005); *Water Techs.*, 850 F.2d at 668-69 (inferring intent from knowledge of the patent and control over the manufacture of the infringing product and citing 4 Donald S. Chisum, *Patents* § 17.04[4][d], at 17-52 (1984) for the proposition that “design of infringing product may constitute active inducement”).

At the outset, QSI does not dispute that it had knowledge of the '552 and '755 patents. Under *Grokster*, *Water Technologies*, and *DSU Medical*, QSI may therefore be liable under § 271(b) if it had specific intent to cause infringement of the '552 and '755 patents by the manner in which the drives are caused to be used. See *MEMC*, 420 F.3d at 1378 n.4. Applicable to this analysis, *Grokster* recognized that a failure to remove or diminish infringing features of a distributed product is relevant to a party's intent that those features be used for direct infringement. 545 U.S. at 939 & n.12 (noting that evidence of a failure to act, however, must be accompanied by other evidence of affirmative acts); see also *id.* at 940 n.13 (“[T]he distribution of a product can itself give rise to liability where evidence shows that the distributor intended and encouraged the product to be used to infringe.”). Ricoh's focus on the separability of the allegedly infringing functionality from the nonin-

fringing functionality of the Quanta drives may, therefore, be relevant to whether QSI had a specific intent to encourage another's infringement.

In particular, QSI's role as the designer and manufacturer of the optical drives in question may evidence an intent sufficiently specific to support a finding of inducement. As indicated above, *Water Technologies* inferred a specific intent to cause infringement from a defendant's knowledge of the patent and control over the design or manufacturing of the product used for direct infringement. 850 F.2d at 668-69. Moreover, *Grokster* recognized that providing instruction on how to engage in an infringing use "show[s] an affirmative intent that the product be used to infringe." 545 U.S. at 936. In this case, QSI has incorporated into its optical drives software that instructs the hardware to perform a series of steps. Ricoh asserts that the only function of certain software components is to instruct the drives to perform its patented methods. See, e.g., Schlesinger Declaration at 11. Ricoh thus argues that QSI's specific intent that the '552 and '755 patents be infringed is shown by this affirmative act of incorporating components whose sole purpose is to cause the drives to operate in a manner that infringes the '552 and '755 patents under normal circumstances. To the extent that the drives do contain components which are in fact separable from those used to implement noninfringing functions, and to the extent that the components do not in fact have a purpose other than the performance of infringing functions under normal use conditions, such evidence would create a material issue of fact regarding QSI's intent that its drives be used to infringe the '552 and '755 patents, which could not be decided on summary judgment.

Finally, although we have endeavored to articulate the legal principles under which Ricoh's inducement claims should be analyzed, we are unable to determine whether issues of material fact exist in the first instance. Because the court discounted Ricoh's evidence on purely legal bases, we decline to assess the factual sufficiency of that evidence as it impacts Quanta and NU's motion for summary judgment. Accordingly, Ricoh's inducement claim against QSI is remanded for further consideration consistent herewith. We further note that on remand, the issues and proofs regarding QSI's inducement of the manufacturer customers (e.g., Dell) may be different from those regarding its inducement of end-use customers, and the outcome on remand may be different for these groups.

CONCLUSION

Those portions of the district court's judgment that hold that: (1) the asserted claims of the '109 patent are invalid because Ricoh has failed to rebut the presumption that they are obvious; (2) no party infringes the claims of the '955 patent because Ricoh has identified no formatting process that begins as a background process within the meaning of the asserted claims; (3) Quanta does not directly infringe the '552 or '755 patents because § 271(a) does not prohibit selling or offering to sell software containing instructions to perform a patented method; and (4) NU does not directly infringe the '552 or '755 patents because Ricoh has failed to present evidence sufficient to create a material issue of fact on this issue are affirmed. However, the district court's grant of summary judgment of no contributory infringement under § 271(c) by Quanta is vacated and remanded for further proceedings on the material issue of fact as to

whether Quanta's optical disc drives contain hardware or software components that have no substantial noninfringing use other than to practice Ricoh's claimed methods. Similarly, the district court's grant of summary judgment of no inducement under § 271(b) by QSI is vacated and remanded for consideration of whether a material issue of fact exists with respect to QSI's specific intent that the '552 or '755 patents be infringed by the use of Quanta's optical disc drives.

**AFFIRMED-IN-PART, VACATED-IN-PART, AND
REMANDED-IN-PART**

COSTS

No costs.

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

No. 2007-1567

RICOH COMPANY, LTD.,
Plaintiff-Appellant,

v.

QUANTA COMPUTER INC., QUANTA STORAGE, INC.
QUANTA COMPUTER USA, INC.
and NU TECHNOLOGY, INC.,
Defendants-Appellees,

and

BUSINESS LINE DATA, PHILIPS OPTICAL STORAGE,
and PHILIPS TAIWAN, LTD.,
Defendants.

Appeal from the United States District Court for the
Western District of Wisconsin, No. 06-CV-0462,
Chief Judge Barbara B. Crabb.

GAJARSA, Circuit Judge, dissenting as to Section
III. B.

I agree with my colleagues with respect to the result and judgment reached, but I must dissent as to that portion of the opinion and judgment at Section III.B. Specifically, I disagree with my colleagues' decision to decide the difficult issue of contributory infringement on the basis of policy concerns without due regard for the text of 35 U.S.C. § 271(c) and am of the opinion that the majority makes three errors in

its analysis. First, the majority ignores the fact that Quanta does not sell or offer to sell the accused components, as the term “sell” is used in § 271(c). Second, the majority opts for an over-inclusive application of § 271(c) that directly contravenes Supreme Court guidance on how this section ought to be interpreted. Third, the conduct to which the majority objects relates to the *design* and *manufacture* of “components,” even though § 271(c) only addresses the act of *selling* a component. For each of these reasons, I dissent from the majority opinion as to Section III.B; summary judgment of no contributory infringement was proper in this case.

First, § 271(c) imposes contributory infringement liability on “[w]hoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention . . .” 35 U.S.C. § 271(c). In this case, the asserted claims of the ’552 and ’755 patents are directed to methods of writing data to optical discs. The district court reasoned that the accused devices, in addition to writing data to optical discs, were also capable of reading data from optical discs, and the court concluded that the accused devices were therefore suitable for a substantial noninfringing use. *Ricoh Co. v. Quanta Computer, Inc.*, 579 F. Supp. 2d 1110, 1115-16 (W.D. Wis. 2007) (“*Summary Judgment Order*”). Accordingly, the court ruled that Quanta did not contributorily infringe the ’552 and ’755 patents. *Id.* On appeal, Ricoh asserts that because the reading function is wholly separable from the writing function of the accused drives —*i.e.*, Quanta could have sold read-only drives or drives lacking the features accused of

infringing the patents¹—Quanta cannot avoid liability for contributory infringement simply by putting those functions together in the same box. But irrespective of whether the hardware and software components of Quanta's drives identified by Ricoh constitute a separable component or a material or apparatus for use in practicing Ricoh's method claims, it is undisputed that Quanta has neither offered for sale nor sold these components as the term "sale" has been interpreted by this court.

The unmistakable holding of *Hodosh v. Block Drug Co., Inc.*, 833 F.2d 1575 (Fed. Cir. 1987), is that "offers to sell or sells" in § 271(c) refers to "the material the accused actually sells." *Id.* at 1578. In *Hodosh*, the question was whether the sale of unpatented toothpaste, which was used by consumers to practice a patented method, would constitute contributory infringement under § 271(c) if the sales were made by a party other than the patentee. One party argued that such a sale would not constitute contributory infringement because the toothpaste contained the staple article potassium nitrate. In rejecting this argument, the court did not hold, as the majority here suggests, "that an otherwise *infringing* product may automatically escape liability merely because it contains a *noninfringing* staple ingredient." Rather, the court focused on the language of the statute and held that

¹ Ricoh's liability expert, T.E. Schlesinger, stated that "the electronic circuitry, firmware elements, and other components of the accused Quanta drives that [allegedly perform the methods of the '552 and '755 patents] have no practical use other than" performance of those methods. Declaration of T.E. Schlesinger in Support of Ricoh's Opposition to Quanta's Motion for Summary Judgment at 11 (hereinafter "Schlesinger Declaration").

the language of § 271(c) . . . *deals with the material actually sold by the accused and the uses made of it by its purchasers. Section 271(c) requires examination of the patented method only in determining whether the material the accused actually sells constitutes a material part of the invention and is known by the accused to be especially made or adapted for use in infringing the patent. Neither party here "sells" potassium nitrate, and Block's attempted limitation of the staple/nonstaple inquiry to that mere ingredient would eliminate the § 271(c)-mandated inquiries relating to whether what was actually sold was a material part of the invention and whether the seller knew that what was actually sold was especially made or adapted for use in infringement of the patent.*

Hodosh, 833 F.2d at 1578 (footnote omitted) (emphasis added). In the present case, neither party "sells" components adapted to perform Ricoh's patented write methods. They sell optical disc drives capable of reading discs, writing in a noninfringing manner, and writing in an allegedly infringing manner. The majority's attempted limitation of the staple/nonstaple inquiry to one mere component of the optical disc drives sold by Quanta (1) requires an inappropriate factual finding, as neither did the district court find nor does the record presented to us on appeal demonstrate that Quanta's optical disc drives include a wholly separable infringing component; and (2) would eliminate the § 271(c)-mandated inquiry relating to whether what was actually sold was suitable for a substantial noninfringing use.

Second, the majority's interpretation of § 271(c) subjugates the public interest in access to unpatented

devices to a patentee's interest in realizing economic reward from a patented method. In *Sony Corporation of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984), the Supreme Court reasoned that "when a charge of contributory infringement is predicated entirely on the sale of an article of commerce that is used by the purchaser to infringe a patent, the public interest in access to that article of commerce is necessarily implicated." *Id.* at 440. As to the balance of that public interest against the private right of a patent owner, "the patent statute[] makes reward to the owner a secondary consideration." *Id.* at 429 (quoting *United States v. Paramount Pictures*, 334 U.S. 131, 158 (1948)). Thus, to strike the appropriate balance, the Court has stated that the "sale of an article which though adapted to an infringing use is also adapted to other and lawful uses, is not enough to make the seller a contributory infringer," reasoning that "[s]uch a rule would block the wheels of commerce." *Sony*, 464 U.S. at 441-42 (quoting *Henry v. A.B. Dick Co.*, 224 U.S. 1, 48 (1912), overruled on other grounds, *Motion Picture Patents Co. v. Universal Film Mfg.*, 243 U.S. 502, 517 (1917)).

Moreover, in *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005), although a copyright case, the Supreme Court explicitly stated that the purpose of the contributory infringement doctrine was to presume an intent that a product be used to infringe another's patent. *Id.* at 932 ("The doctrine was devised to identify instances in which it may be presumed from distribution of an article in commerce that the distributor intended the article to be used to infringe another's patent, and so may justly be held liable for that infringement."). Accordingly, "where an article is 'good for nothing else' but infringement, there is no legitimate public interest in its unlicensed

availability, and there is no injustice in presuming or imputing an intent to infringe." *Id.* (citation omitted) (quoting *Canda v. Mich. Malleable Iron Co.*, 124 F. 486, 489 (6th Cir. 1903)). As ensconced in § 271(c), the doctrine of contributory infringement "absolves the equivocal conduct of selling an item with substantial lawful as well as unlawful uses, and limits liability to instances of more acute fault than the mere understanding that some of one's products will be misused. It leaves breathing room for innovation and a vigorous commerce." *Id.* at 932-33.

Despite the Supreme Court's rationale of contributory infringement that favors public access to unpatented goods, the majority here adopts an over-inclusive interpretation of § 271(c) that fails to heed the high Court's caution. In particular, the majority's expansive interpretation of the phrase "offers to sell or sells" subjects not only Quanta to contributory infringement liability, but also Dell, HP and any other reseller of Quanta's drives. These resellers come within the majority's reading of § 271(c) even though their only activity is to sell an unpatented optical disc drive (or even an entire computer system) that has multiple functions, only one of which is alleged to practice Ricoh's claimed methods. Thus, whereas the majority seeks to avoid situations in which "the only remedy would be against end users of the product," it opts for a rule that captures every seller in the chain of commerce for a given unpatented product. The majority's proposed rule would burden the wheels of commerce and would give undue regard to the limited monopoly of the patent statute at the expense of the public interests identified by the Supreme Court.

Third, § 271(c) imposes contributory infringement liability based solely on offering to sell or selling an unpatented good, but the majority's analysis is (on its face) driven by a concern for activities other than such sales. For example, the majority takes issue with my analysis of § 271(c), because "Quanta may escape liability as a contributory infringer merely *by embedding* that microcontroller in a larger product with some additional, separable feature before importing and selling it." Nothing in § 271(c) can be read as directed to the non-sale activity of embedding components in larger products. Rather § 271(c) is concerned only with the *sale* of either the component or the larger product—under the straightforward analysis of *Hodosh*, Quanta has not sold the component (to the extent a separable component exists), only the larger product. Similarly, the majority recognizes that "no § 271(c) liability could ever be found where an infringing component is both manufactured *and* assembled into something else by the same person." Obviously, § 271(c) does not impose liability for manufacturing unpatented components, and the majority's efforts to target this activity under a provision concerned solely with an offer to sell or sale is misguided under the plain language of the statute.

In sum, my judgment is that the majority's analysis in Section III.B is flawed according to the language of the statute; the balance of interests contemplated by the statute, as that balance has been addressed by the Supreme Court; and the types of activities to which the statute is properly addressed. I would affirm the district court for these reasons.

APPENDIX B

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN

No. 06-C-462-C

RICOH COMPANY, LTD.,
Plaintiff,

v.

QUANTA COMPUTER, INC., QUANTA STORAGE, INC.,
QUANTA COMPUTER USA, INC., NEW UNIVERSE
TECHNOLOGY, INC. and NU TECHNOLOGY, INC.,
Defendants,

and

QUANTA STORAGE, INC.,
Third-Party Plaintiff,

v.

PHILIPS TAIWAN, LTD., BUSINESS LINE DATA, and
PHILIPS OPTICAL STORAGE,
Third-Party Defendants.

OPINION AND ORDER

Defendants Quanta Computer, Inc., Quanta Storage, Inc., Quanta Computer USA, Inc. and NU Technology sell optical disc drives that read and record CDs and DVDs. In this civil action, plaintiff Ricoh Company, Ltd. contends that defendants are infringing four of its patents that disclose methods for recording discs such as CDs and DVDs. Plaintiff is a Japanese corporation. Defendants Quanta Storage

and Quanta Computer, Inc. are Taiwanese corporations. Defendants Quanta Computer USA and NU Technology are California corporations.

After a rather tumultuous discovery process, defendants' motion for summary judgment is now ripe for review. The motion will be granted with respect to U.S. Patent Nos. 6,631,109 and 6,172,955 because claims 1 and 4 of the '109 patent are invalid for obviousness under 35 U.S.C. § 103 and because plaintiff has failed to adduce any evidence that the accused devices include the limitation of "starting a formatting process . . . as a background process" so as to infringe claims 8-12 of the '955 patent. Although I conclude that there are genuine issues of material fact with respect to the question whether the accused devices perform the patented methods of the asserted claims from U.S. Patent Nos. 6,661,755 and 5,063,552, I must grant defendants' motion for summary judgment with respect to those claims as well because plaintiff has failed to adduce evidence that defendants engaged in acts necessary to support a finding in its favor for any of the three theories of infringement under 35 U.S.C. § 271.

Because I am dismissing all of plaintiff's claims against defendants, this necessarily means that I must dismiss as moot defendants' claims against third-party defendants Philips Taiwan, Ltd., Philips Optical Storage and Business Line Data. Defendants are suing third party defendants for the purpose of indemnification only. If there is no infringement, there can be no damages, and therefore, no need for indemnification.

I begin with a note on the structure of the opinion. I will consider first whether the accused devices infringe the asserted claims and whether any of the

claims are invalid. Next, I will consider whether defendants engaged in any conduct for which they may be held liable under 35 U.S.C. § 271. For the purpose of readability, I have structured the opinion by patent, with a separate statement of undisputed facts for each one. Further, to limit the size of an already lengthy opinion, I have not included facts that are not related to issues in dispute. For example, in many situations, the parties discussed only one or two elements in their arguments regarding infringement and invalidity. In those situations, I have construed the silence as a concession that the other elements are present and have limited discussion of the facts accordingly.

I. U.S. PATENT NO. 6,631,109

Invention: Using a particular pattern of laser pulses, or “write strategy,” to prevent overheating during recording process

Accused Devices: SBW-081, SBW-161, SBW-141, SBW-242, SBW-242C, SBW-243, SBW-245, SDW-041, SDW-042, SDW-082, SDW-082K, SDW-085 and SDW-086

Asserted Claims: 1 and 4

A. *The Claims*¹

Claim 1 of the '109 patent discloses:

An optical recording method which records a sequence of data blocks onto a recording layer of an optical recording medium by emitting light to the recording layer of the medium and changing a phase of a recording material of the recording layer, comprising the steps of:

¹ Elements relevant to this opinion are in bold.

applying a light source driving power to a light source to control emission of a light beam to the recording layer of the medium, the driving power including a sequence of mark and space portions, each mark portion having a pulse width that corresponds to a multiple of a period T of a write clock based on a write data modulation method;

setting a multi-pulse waveform of each mark portion of the driving power that includes a front-end portion, a multi-pulse portion and a tail-end portion, the front-end portion having a first pulse width t_1 with a high-power write level P_w and starting from a middle-power erase level P_e , the multi-pulse portion including a sequence of write pulses each having a second pulse width t_2 with the write level P_w and a third pulse width t_3 with a low-power base level P_b , the multi-pulse portion having a given duty ratio $z = t_2/(t_2 + t_3)$, and the tail-end portion having a fourth pulse width t_4 with the base level P_b and ending at the erase level P_e ;

setting a linear velocity of rotation of the medium at a controlled speed;

and controlling the waveform when **the linear velocity of rotation of the medium is set in a high-speed range from 5 m/s to 28 m/s**, such that the first pulse width t_1 of the front-end portion ranges $0.1T$ to $1T$ and the fourth pulse width t_4 of the tail-end portion ranges $0.2T$ to $1.3T$.

Claim 4 discloses:

An optical recording method which records a sequence of data blocks onto a recording layer of a rewritable optical recording medium by emitting light to the recording layer of the medium and

changing a phase of a recording material of the recording layer, comprising the steps of:

applying a light source driving power to a light source to control emission of a light beam to the recording layer of the medium, the driving power including a sequence of mark and space portions, each mark portion having a pulse width that corresponds to a multiple of a period T of a write clock based on a pulse width modulation method;

setting a multi-pulse waveform of each mark portion of the driving power that includes a front-end portion, a multi-pulse portion and a tail-end portion, the front-end portion having a first pulse width t_1 with a high-power write level P_w and starting from a middle-power erase level P_e , the multi-pulse portion including a sequence of write pulses each having a second pulse width t_2 with the write level P_w and a third pulse width t_3 with a low-power base level P_b , the multi-pulse portion having a given duty ratio $z = t_2/(t_2+t_3)$, and the tail-end portion having a fourth pulse width t_4 with the base level P_b and ending at the erase level P_e ;

setting a linear velocity of rotation of the medium at a controlled speed; and

controlling the waveform when **the linear velocity of rotation of the medium is set in a high-speed range from 5 m/s to 28 m/s**, such that the first pulse width t_1 of the front-end portion ranges $0.1T$ to $1T$ and the fourth pulse width t_4 of the tail-end portion ranges $0.2T$ to $1.3T$.

B. Background

Rewritable CDs and DVDs store information along their tracks in a layer of "phase change" material, usually a metal alloy. It is possible to change the structure of the "phase change" material from a relatively "crystalline" phase having a more ordered arrangement of atoms to a relatively "amorphous" phase having a less ordered arrangement of atoms, and back, with the appropriate application of heat from the laser source.

The phase transformation on the recordable optical disc results in differences in the light reflected from the layer, making it possible for the laser to distinguish (amorphous) marks from (crystalline) spaces written along the track. To produce an amorphous mark on the rewritable optical disc, a series of laser pulses alternating between a relatively high power and a relatively low power is applied, which causes the phase-change material to melt and then solidify quickly, before the atoms can settle into their more orderly crystalline state. To erase an amorphous mark on a rewritable optical disc and to write a crystalline space, the material is heated with a laser beam at a (usually constant) intermediate power, which heats the material in a different way that increases the mobility of the atoms to allow them to settle into their crystalline state.

C. Prior Art

The application for European Patent EP 0 898 272 was published on February 24, 1999. The application for European Patent EP 0 737 962 was published on October 16, 1996. The '272 patent and the '962 patent disclose an optical recording method that records by emitting light and changing a phase of a recording material.

The '272 patent discusses setting the linear velocity of rotation at a nominal CD speed of 4X. A nominal CD speed of 4X corresponds to a linear velocity of 4.8 to 5.6 m/s. In the description of the preferred embodiments of the '272 patent, it is noted that "satisfactory signal properties cannot be obtained" at speeds greater than 5.0 m/s.

The '962 patent discusses setting the linear velocity of rotation in the range from 1.2 m/s to 5.6 m/s. None of the embodiments of the '962 patent use recording speeds within the range of the '109 patent.

The '109 patent was issued on October 7, 2003 and has a U.S. filing date of March 1, 2001.

OPINION

The focus of the parties' arguments regarding the '109 patent is whether claims 1 and 4 are invalid under the prior art. Under 35 U.S.C. § 102(b), a patent is anticipated "if the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States." Under 35 U.S.C. § 103(a), a patent is invalid "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The burden is on defendants to show invalidity by clear and convincing evidence. *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1336-37 (Fed. Cir. 2006).

Defendants identify two European patents that they believe render claims 1 and 4 invalid as obvious or anticipated: European Patent EP 0 898 272 (application published February 1999) or European Patent

EP 0 737 962 (application published October 1996). (The parties agree that these patents are prior art because their applications were published more than one year prior to March 1, 2001). The only element of claims 1 and 4 that plaintiff says these prior art references do not have is "a linear velocity of 5 m/s to 28 m/s." Accordingly, I will consider that question only.

Defendants point out that the European patents disclosed speeds up to 5.6 m/s. With respect to anticipation, defendants cite *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 782 (Fed. Cir. 1985), in which the court held that "when, as by a recitation of ranges or otherwise, a claim covers several compositions, the claim is 'anticipated' if one of them is in the prior art." With respect to obviousness, defendants cite *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1311 (Fed. Cir. 2006), which held, "Where a claimed range overlaps with a range disclosed in the prior art, there is a presumption of obviousness."

Plaintiff has a number of objections to defendants' reliance on *Titanium Metals* and *Ormco*. First, plaintiff says that those cases have no relevance because the prior art references do not actually teach any of the same speeds as claims 1 and 4 of the '109 patent. In support of this curious argument, plaintiff cites an untimely filed report of its expert, who says that neither of the European patents disclose recording speeds of 5 m/s or greater because the embodiments discussed in the European '962 patent all used speeds below 5 m/s and the specification of the European '272 patent states that when the recording speed "exceeds 5.0 m/s . . . satisfactory signals cannot be obtained." Further, plaintiff points out that the teachings of a prior reference are a question

of fact and argues that its expert's opinion prevents the court from deciding this issue as a matter of law.

I disagree with plaintiff on two counts. First, conflicting expert opinions in a patent case do not automatically require a conclusion that the court must deny a motion for summary judgment. If that were the case, summary judgment motions would be a pointless exercise in patent cases; it is rare to see one that does not involve dueling expert opinions. The question on summary judgment is whether there are any "*genuine* issues of material fact," Fed. R. Civ. P. 56, or, in other words, whether a reasonable jury could find in favor of the nonmoving party. *Long Island Savings Bank, FSB v. United States*, 476 F.3d 917, 925 (Fed. Cir. 2007).

In this case, no reasonable jury could side with plaintiff's expert because his opinion is directly contrary to the claim language in the European patents. Claim 1 of the '272 patent discloses a recording speed "in a range of 2.4 to 5.6 m/s," and claim 9 of the '962 patent discloses a recording speed of "not less than 1.2 m/s and not more than 5.6 m/s." Although the embodiments discussed in the '962 patent do not use speeds greater than 5.0 m/s, as plaintiff well knows from its arguments related to infringement, a claim is not limited to its embodiments, even when all described embodiments include the same limitation. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004). Further, plaintiff cites no authority for its proposition that an earlier patent counts as prior art only if it reports perfect results using the disclosed methods.

In any event, the European '272 patent does report success with results up to and including speeds of 5.0 m/s, which means that the '109 patent and the Euro-

pean '272 patent overlap even under plaintiff's view. Arguably, under *Titanium*, the '272 patent anticipates the '109 patent, *Cf. Hewlett-Packard Co. v. Mustek Systems, Inc.*, 340 F.3d 1314, 1326 (Fed. Cir. 2003) (accused device infringes even if it only sometimes embodies the claim). At the least, the overlap raises a presumption of obviousness under *Ormco*, shifting the burden to plaintiff to show that the method of the '109 patent is not obvious; the overlap need not be substantial to trigger the presumption. *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997) (acknowledging that claimed invention was rendered *prima facie* obvious by prior art reference when disclosed range (50-100 Angstroms) overlapped claimed range (100-600 Angstroms)); *In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990) (concluding that claimed invention was rendered obvious by prior art reference whose disclosed range ("about 1-5%" carbon monoxide) abutted claimed range ("more than 5% to about 25%" carbon monoxide)).

Under Federal Circuit law, the presumption of obviousness can be rebutted if it can be shown that the prior art teaches away from the claimed range, or the claimed range produces new and unexpected results. *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1322 (Fed. Cir. 2004). Although this exception to a finding of obviousness may no longer apply after *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741-42 (2007) (holding that Federal Circuit's standard for obviousness incorrectly required that prior art include specific teaching to solve particular problem at issue), even under the Federal Circuit cases, plaintiff has failed to overcome the presumption because it fails to explain how the prior art "teaches away" from its '109 patent or how the '109 patent

provides "new and unexpected results." Rather, plaintiff simply makes conclusory assertions that they do.

Accordingly, I conclude that claims 1 and 4 of the '109 patent are obvious. This conclusion makes it unnecessary to decide whether some of the accused devices do not infringe because they do not have the pulse width required by the claims.

II. U.S. PATENT NO. 6,172,955

Invention: Allowing a disk to be recorded before formatting is completed by making the formatting a background process during recording

Asserted Claims: 8-12

Accused Devices: SDW-041, SDW-042, SDBvT082, SDW-082K, SDW-085 and SDW-086

UNDISPUTED FACTS

A. *The Claims*

Claim 8 of the '955 patent discloses:

A formatting method for formatting a rewritable optical disc, data being recorded on said optical disc by using a fixed packet write method, said formatting method comprising the steps of:

starting a formatting process for said optical disc as a background process, the formatting process being performed so as to fill a recording area of said optical disc by packets having a fixed length;

enabling execution of at least one of a recording process and a reproducing process by interrupting the formatting process and resuming the formatting process after the at least one of the recording process and the reproducing process is ended;

and ending the formatting process after the recording area to be formatted has been filled by the packets having the fixed length.

Claim 9 discloses:

A formatting method for formatting a rewritable optical disc, data being recorded on said optical disc by using fixed packet write method, said formatting method comprising the steps of:

starting a formatting process for said optical disc as a background process, the formatting process being performed so as to fill a recording area of said optical disc by packets having a fixed length;

enabling execution of another process while the formatted process is being performed;

and ending the formatting process after the recording area to be formatted has been filled by the packets having the fixed length, wherein the step of enabling comprises the step of notifying completion of the formatting process before the formatting process is completed.

Claim 10 discloses:

The formatting method as claimed in claim 9, further comprising the steps of:

interrupting the formatting process when a request for recording user data is made;

recording the user data on said optical disc;

and resuming the formatting process after the user data has been recorded.

Claim 11 discloses:

The formatting method as claimed in claim 10, wherein the step of resuming includes the step of excluding an area in which the user data has

been recorded from among areas to be formatted when the packets having the fixed length are not yet recorded in the area in which the user data has been recorded.

Claim 12 discloses:

The formatting method as claimed in claim 9, further comprising the steps of:

interrupting the formatting process when a request for reproducing data recorded in a designated area is made;

reproducing the data in said designated area;

and resuming the formatting process after the data in said designated area has been reproduced.

B. Background

Data can be written to an optical disc in units called "packets." To help write user data in fixed sized packets, a rewritable CD or DVD may be formatted. Formatting consists of filling the recording area on the disc with packets (usually, packets containing zeroes) so that the system can give an address to each packet and quickly access the packet locations on the disc for later reading and writing operations. Formatting an optical disc can take 30 minutes to an hour.

C. The Accused Devices

Plaintiff tested the accused devices to determine whether they performed the methods disclosed in claims 8-12. During testing, plaintiff sent the format command to the drive at counter 420. (Although the parties do not explain what a "counter" is, presumably it is a timing device.) At counter 475 (17 seconds

later), the drive showed as being busy and unable to accept read or write requests. The first time plaintiff saw that the drive was able to accept read or write commands was at counter 690, 1 minute and 29 seconds after sending the format command.

In another testing, plaintiff sent the format unit command to the drive at counter 27. At counter 33 (6 seconds later), the drive showed as being busy and unable to accept read or write requests. Plaintiff determined the drive was able to accept read or write commands at counter 50, 21 seconds after the format command.

OPINION

The parties agree that a "background process" as that term is used in claims 8-12 of plaintiff's '955 patent can be interrupted at *any* time to allow another, higher priority process to be performed. It is also undisputed that when formatting begins in the accused devices, there is a period of time when formatting cannot be interrupted. Thus, it should follow that the parties agree that the accused devices do not include the limitation of "starting a formatting process for said optical disc as a background process" required by independent claims 8 and 9 and dependent claims 10, 11 and 12.

Unfortunately, the parties do not agree on the last point. Instead, plaintiff makes a number of tortured arguments in an attempt to avoid the plain language of the patent. First, plaintiff makes the irrelevant argument that the '955 patent does not require the formatting to remain in the background at all times. Because the question is only whether formatting in the accused devices "start[s]" as a background process, this argument is a red herring.

Second, plaintiff maintains the puzzling position it took at the claim construction hearing that "starting a formatting process . . . as a background process" can mean that the formatting process does *not* start as a background process. According to plaintiff, the claim means only that "one must start a background process to format a portion of the disc." But if this were the intended meaning, the inventor could have written, "starting a formatting process, which may become a background process at some point." Of course, that is not what the claim says. The claim clearly requires that the formatting process be started *as* a background process. Any argument to the contrary is, as plaintiff would say, "a strained verbal quibble." Plt.'s Br., dkt. #262, at 37.

"But wait!" plaintiff says, even if "starting" actually means starting, claims 8 and 9 use the word "comprising," which means that there could be other steps not recited in the claims. *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1345 (Fed. Cir. 2003). In particular, plaintiff says, there could be an undisclosed formatting process that begins *before* the step recited in the claim and the earlier formatting process might not start as a background process. Even if this is true, it does not show infringement. Plaintiff must still show that the accused products "star[t] a formatting process . . . as a background process." Because the only evidence in the record is that the formatting in the accused products *never* starts as a background process, this element is missing.

All of the asserted claims in the '955 patent include the limitation of "starting a formatting process . . . as a background process." Because plaintiff has failed to adduce any evidence that the accused devices include

this limitation, I must grant defendants' motion for summary judgment with respect to the '955 patent. This conclusion makes it unnecessary to decide whether the accused devices include a "notifying completion" limitation or "fixed packets" limitation or whether claim 8 was anticipated by the prior art.

III. U.S. PATENT No. 6,661,755

Invention: Creates a "buffer" during recording process by pausing the recording process when data runs out; this prevents the disk from becoming unusable.

Disputed Claims: 1-3

Accused Devices: SEW-081, SEW-161, SBMT241, SBW-242, SBW-242C, SBW-243, SBW-245, SDW-041, SDW-042, SDW-082, SDW-082K, SDW-085 and SDW-086

UNDISPUTED FACTS

A. *The Claims*

Claim 1 of the '755 patent discloses:

A method of recording on an optical disc recording media, said method comprising the steps of:

transferring stored input information to an encoder; transferring encoded information to a record circuit;

causing an input buffer to contain less than a threshold amount of said input information;

and when said input buffer contains less than the threshold amount of said input information, pausing said transferring of said encoded information, to stop said record circuit at a first point

62a

on said optical disk recording media while maintaining said encoded information;

and wherein said record circuit **does not write any run-out blocks** while paused.

Claim 2 discloses:

A method of recording on an optical disc recording media, said method comprising the steps of:

transferring stored input information to an encoder; transferring encoded information to a record circuit;

causing an input buffer to contain less than a threshold amount of said input information;

when said input buffer contains less than the threshold amount of said input information, pausing said transferring of said encoded information, to stop said record circuit at a first point on said optical disk recording media while maintaining said encoded information;

causing said input buffer to contain at least a second threshold amount of information; and resuming said step of transferring said encoded information to said record circuit, to thereby restart said record circuit while **maintaining data succession** across said first point on said optical disc recording media;

wherein said record circuit **does not write any run-in blocks** during said resuming.

Claim 3 discloses:

3. The method of claim 2, wherein said record circuit **does not write any run-out blocks** during said pausing.

B. Background

An optical disc drive can sometimes write data to a disc faster than the data source can feed the data to the input memory, or buffer, of the drive. Without buffer under-run protection, when the buffer runs out of data to feed the writing circuit, erroneous or "non-sense" data is written to the disc.

C. The Accused Devices

Each of the accused devices includes a feature called buffer under-run protection, which is now "an industry requirement" for optical disc drives. Buffer under-run "events" are an ordinary and expected occurrence in an optical disc drive, particularly when a drive is attached to a host computer on which multiple applications are running simultaneously, thus placing high demands on the computer's central processing unit. The accused drives automatically use buffer under-run protection whenever the buffer in the optical disc drive gets low.

Plaintiff conducted tests on the accused products to determine whether they perform the claimed method. In testing the drives, plaintiff intentionally stopped sending data to the drives for one minute in order to activate the buffer under-run protection of the devices. Plaintiff detected no run-in or run-out blocks on the discs when reading the discs after the forced pause in transferring data. Run-in and run-out blocks are the blocks defined by the Orange Book standard; they must remain on the disc so that they can be read later by any standard conforming drive. In testing the drives, plaintiff executed the "Synchronize cache" command before reading any blocks.

During the buffer under-run test, plaintiff observed that the user data delivered by the drive upon play-

back had maintained continuity of data within a tolerance of 2 clock bits compared with the user data sent to the drive for recording on the disc. From this, plaintiff inferred that the user data on the disc had therefore been written and synchronized within a tolerance of ± 2 clock bits.

OPINION

A. Infringement: Run-out Blocks and Run-in Blocks (Claims 1-3 of '755 Patent)

Claims 1 and 3 of the '755 patent prohibit the writing of "run-out blocks" when recording is paused; claims 2 and 3 prohibit the writing of "run-in blocks" when recording is resumed. (Apart from plaintiff's proposed fact that "Run-in and run-out blocks are the blocks defined by the Orange Book standards," neither side proposes any facts defining these terms. However, because the parties' dispute surrounding the question of infringement does not hinge on the precise meaning of these terms, it is unnecessary to provide a construction in this opinion.)

Defendants' argument on this element is strained. It is undisputed that plaintiff has shown in its testing of the accused products that it found no run-in blocks after the recording paused (with respect to claims 2 and 3) and no run-out blocks after recording resumed (with respect to claims 1 and 3). However, defendants say that this showing is not enough to survive summary judgment because plaintiff did not try to detect the blocks *immediately* after the pause or *immediately* after recording resumed. Instead, plaintiff first "executed the Synchronize cache command" before reading any blocks. Therefore, defendants say, it is possible that run-in and run-out blocks *were* written on to the disc, but then they were written over by

something else and in a way that their presence could no longer be detected.

Defendants' argument sounds like a bad conspiracy theory. And, as with most conspiracy theories, defendants point to no evidence that supports it. In particular, defendants propose no facts explaining how the blocks could be overwritten, and, even if this were possible, whether it would be at all likely that the blocks *would* be overwritten in the time that it would take to "execut[e] the Synchronize cache command." Although defendants dispute plaintiff's proposed facts that run-in blocks and run-out blocks "must remain on the disc so that they can be subsequently read by any standard," the evidence they cite to support the dispute does not contradict plaintiff's proposed fact. At the very least, this question is genuinely disputed.

Defendants overstate plaintiff's burden on summary judgment. Plaintiff does not have to prove with 100% certainty that defendants' products infringe the '955 patent; it only has to adduce enough evidence to permit a jury, drawing all reasonable inferences in plaintiff's favor, to find infringement. Plaintiff has satisfied that burden with respect to the absence of run-in blocks and run-out blocks in the accused devices.

Defendants' misunderstanding of summary judgment burdens is demonstrated again with respect to their alternative argument. They argue that because plaintiff induced a buffer under-run in its test by intentionally stopping the flow of data, it cannot prove infringement because an ordinary user would not intentionally induce a buffer under-run. In other words, defendants say that because plaintiff did not attempt to demonstrate infringement by running the accused products over and over again waiting for a buffer un-

der-run to occur on its own, it is unreasonable to infer that a buffer under-run would *ever* occur in the accused products.

This argument is only slightly less ridiculous than defendants' conspiracy theory. The facts show that buffer under-run events are an "ordinary and expected occurrence." (Defendants did attempt to dispute this fact in their responses to plaintiff's proposed findings of fact, but they cited no evidence to contradict it and their assertion that plaintiff's cited evidence did not support the proposed fact was simply wrong.) Obviously, if defendants' drives never experienced a buffer under-run, there would be no point in having a feature designed to protect the recording process from such an event. Thus, it is at least reasonable to infer that buffer under-runs occur in defendants' products.

B. *Maintaining data succession*
(*Claims 2 and 3 of '755 Patent*)

In construing the claims, I defined "maintaining data succession" as "maintaining continuity of data within a tolerance of 2 clock bits." Defendants have not come forward with any evidence of their own to show that the accused products do not meet this element. However, they say that plaintiff has failed to meet its burden to show that they do. In particular, defendants argue that plaintiff's evidence shows only that "the data could be read back from the disc," which is not enough to show a specific tolerance level of 2 clock bits.

Defendants' argument is contradicted by plaintiff's expert, who testified that during testing, continuity of data in the accused products *was* maintained within a tolerance of ± 2 clock bits. Thus, plaintiff has

adduced evidence that addresses the limitation as defined by the court. Although defendants dispute this testimony, they neither provide their own version of the facts nor provide any reason why the expert's own observations are insufficient to establish the tolerance level.

Because defendants offer no other reason why the accused products do not infringe (and they do not advance any arguments regarding invalidity of the '755 patent), I conclude that a genuine issue remains whether the accused devices infringe the '755 patent.

IV. U.S. PATENT NO. 5,063,552

Invention: Combines positive attributes of two different kinds of optical disc recording and reproduction methods to enhance the efficiency and economy of the process. In particular, the invention uses "annular zones" on the disk to determine the reproduction speed and the rotation speed of the disc.

Claims: 1 and 8

Accused Devices: SBW-081, SBW-161, SBVJ241, SBW-242, SBW-242C, SBW-243, SBW-245, SDW-041, SDW-042, SDW-082, SDW-082K, SDW-085 and SDW-086

UNDISPUTED FACTS

A. *The Claims*

Claim 1 of the '552 patent discloses:

A method for controlling an information recording and/or reproduction speed "f" and a rotation speed "n" of an optical disk used in an information recording and/or reproduction device, said optical disk having a plurality of tracks in the form of concentric circles or a spiral, said infor-

68a

mation recording and/or reproduction device being adapted to access said tracks by means of a light beam while rotating said optical disk, thereby to optically record information on or reproduce information from said tracks, said method comprising the steps of:

dividing said tracks into a plurality of concentric annular blocks which are different in radius from each other;

changing said information recording and/or reproduction speed "f" in accordance with the radius of a track to be accessed in such a manner that said recording and/or reproduction speed "f" is constant within a block but different as between said blocks depending on the block radii;

and changing said rotation speed "n" of said optical disk in such a manner that $f/(n-r)$ is constant, where "r" is the radius of said track to be accessed.

Claim 8 discloses:

A method according to claim 1, wherein said tracks are substantially concentrically arranged on said disk in the form of a continuous spiral.

OPINION

Again, defendants have not pointed to any evidence showing that their products do not infringe plaintiff's patents. Instead, they have argued only that plaintiff has failed to meet its burden on summary judgment. Although defendants are entitled to put plaintiff to its proof, *Celotex Corp. v. Catrett*, 477 U.S. 317 (1986), they must first "infor[m] the district court of the basis for [their] motion, and identif[y] those portions of 'the pleadings, depositions, answers to inter-

rogatories, and admissions on file, together with the affidavits, if any,' which [they] believ[e] demonstrate the absence of a genuine issue of *material* fact." *Id.* at 323 (emphasis added).

With respect to the '552 patent, defendants have not met their initial burden because they have failed to identify any material facts that plaintiff failed to prove. In the brief supporting their motion, defendants do not point to any elements of claims 1 and 8 that their products do not meet. Instead, defendants say generally that their products can operate in "other, different modes" besides "ZCLV."

Defendants' argument on the '552 patent is a non sequitur. Nowhere do the claims include a limitation for the "ZCLV mode." Defendants recognize this in the beginning of their reply brief, Dkt. #274, at 2 ("ZCLV" cannot "replace the actual claims of the patent[t]"), but they make the argument anyway. Because defendants failed to "poin[t] out" the absence of a genuine issue of any material fact, *Celotex*, 417 U.S. at 325, plaintiff had no obligation to come forward with evidence of its own. *Sublett v. John Wiley & Sons, Inc.*, 463 F.3d 731, 736 (7th Cir. 2006). Accordingly, I conclude that defendants have failed to show the absence of a genuine dispute with respect to whether the accused devices infringe claims 1 and 8 of the '552 patent.

Although it is genuinely disputed whether the accused devices infringe the '755 patent and the '552 patent, the question remains whether plaintiff has shown that defendants have engaged in conduct that violates 35 U.S.C. § 271. I consider that question below.

V. THEORIES OF INFRINGEMENT

UNDISPUTED FACTS

The accused optical drive model numbers SBW-081, SBW-161, SBW-241, SBW-242, SBW-242C, SBW-243, SBW-245, SDW-041, SDW-042, SDW-082, SDW-082K, SDW-085 and SDW-086 are manufactured by defendant Quanta Storage. At least some of the other defendants import these drives into the United States.

Quanta Storage and Quanta Computer do not sell optical drives to individual consumers, but only to corporate customers. More than one million of the accused devices have been sold.

Defendant NU Technology tests drives when "a new model come[s] in," which is an average of "10 drives" a year. Quanta's customers, such as NU Technology, Inc., Hewlett-Packard, Dell and Gateway, test at least some of the accused Quanta drives by, among other things, using them to write data to rewritable optical discs in the United States. More specifically, Dell tests drives to confirm that "the write strategy works." Hewlett Packard uses "ZCLV" in the course of its tests if the drive supports that feature.

Defendant Quanta Storage provides specification sheets for its drives to its corporate customers. These sheets include the words "buffer under-run protection." In addition, the specifications identify the writing speeds at which "ZCLV" is used.

A set of software, usually called firmware, resides on the computer chips in Quanta Storage's disc drives. It is created by the company that makes the computer chips for the drives. For drives that include a buffer under-run feature, it "makes sense" to have

"some block of code that is dedicated to that buffer under-run functionality" and "has no other purpose." For drives that include the "ZCLV" feature, the drive would "have at least some firmware dedicated to that functionality . . . that has no other purpose." Defendant Quanta Storage performs "firmware fine-tuning" to insure that "ZCLV" works with the drive.

Among the presentation materials given to Dell is a page including a flowchart of an algorithm for buffer under-run protection. At the top of the page, both "Philips" and "Quanta Storage" are listed.

Defendant Quanta Storage allows its website visitors to download drivers for some of its optical disc drives. On a page called "Before You Download" are suggestions for those who have "problem[s] for reading/writing data," including installing the latest burning software and using "qualified CD-R/CD-R/W discs." In addition, the website contains a product description of the SDW-086 that includes writing speeds up to 24X.

In a letter dated October 14, 2005, plaintiff sought to "resume settlement discussions" with defendant Quanta Storage regarding the '755 patent and "patents previously discussed or otherwise notified to your company."

All optical drives made by defendant Quanta Storage are capable of reading optical discs. Reading of the disc and writing to the disc cannot be performed simultaneously.

OPINION

The remaining questions are which theories of infringement plaintiff has adequately proven against which defendants with respect to which accused

products. Unfortunately for plaintiff, the answer to all of these questions is "none."

A. *Infringement under § 271(a)*

Under 35 U.S.C. § 271(a), infringement occurs whenever a party "makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention." The conduct described in § 271(a) is often called "direct infringement."

It is undisputed that defendant Nu Technology "uses" drives in the context of testing them in the United States. However, the problem for plaintiff is that the evidence it cites shows only that defendant Nu tests *some* of its products, not all of them. Plaintiff has failed to adduce any specific evidence that Nu tested any of the products accused of infringing the '755 and '552 patents or that it tested them in a way that would constitute infringement. Because plaintiff has the burden to prove this, the absence of evidence on this point requires that I grant defendants' motion for summary judgment with respect to defendant Nu on a theory of 'infringement under § 271(a).

Plaintiff includes arguments in the "direct infringement" section of its brief regarding defendants' sales and offers to sell the accused devices. Because the claims asserted in the '552 patent and the '755 patent disclose *methods* for writing and recording rather than an actual device, to prove direct infringement, it is not enough for plaintiff to show a sale or offer to sell of an accused device. *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1321 (Fed. Cir. 2005). In *Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed. Cir. 1993), the court held, "A method claim is directly infringed only by one practicing the patented

method,” suggesting that “use” was the only way a method patent could be infringed under § 271(a). Although in *NTP*, 418 F.3d 1282, the court stated that it was unnecessary to decide that “method claims may not be infringed under the ‘sells’ and ‘offers to sell’ prongs of section 271(a),” *id.* at 1319, it acknowledged that “Congress has consistently expressed the view that it understands infringement of method claims under section 271(a) to be limited to use,” *id.* at 1321. Because plaintiff does not cite any authority or offer any argument why anything other than defendants’ use of the accused devices incorporating the method should constitute infringement under § 271(a), I will grant defendants’ motion for summary judgment with respect to plaintiff’s claims for infringement under that provision.

B. *Infringement under § 271(c)*

A defendant may be liable for indirect, or “contributory,” infringement under 35 U.S.C. § 271(c) if it “offers to sell or sells within the United States or imports into the United States . . . a component of a[n] . . . apparatus for use in practicing a patented process.” There is an important limitation on this theory of infringement that plaintiff does not acknowledge: no infringement occurs if the accused device is “suitable for substantial noninfringing use.” 35 U.S.C. § 271(c). Thus, “[t]he mere sale of a product capable of substantial non-infringing uses does not constitute indirect infringement of a patent.” *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1275 (Fed. Cir. 2004).

Plaintiff says that this limitation applies only to products that are not “especially made or especially adapted” for an infringing use, but plaintiff’s reading of the statute is plainly wrong. Section 271(c) is not

violated unless the accused device is "especially made" for infringement *and* "not . . . suitable for substantial noninfringing use."

All of the accused devices are capable of reading discs as well as recording to them. Plaintiff does not deny that reading the discs is a noninfringing use or that the use of drives to read discs is substantial. In any event, common sense requires a conclusion that reading (that is, playing the disc) is a substantial use.

Alternatively, plaintiff relies on the commonly cited maxim that "an accused product that sometimes, but not always, embodies a claimed method nonetheless infringes." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 623 (Fed. Cir. 1995). Although at first look *Bell* might seem to conflict with the rule in *Dynacore*, the inconsistency is more apparent than real. The two cases address completely different issues. *Bell* addresses the question whether an accused *product* infringes. *Dynacore* addresses whether a particular *defendant* may be held liable under a particular theory of infringement. Thus, *Bell* has no application in this context.

Defendants' motion for summary judgment must be granted with respect to plaintiff's claims under §271(c).

C. Infringement under § 271(b)

Plaintiff puts most of its eggs in the § 271(b) basket, which prohibits anyone from "actively induc[ing] infringement of a patent." A plaintiff seeking to recover under this provision must prove two things: (1) direct infringement by a third party; and (2) "a certain level of intent on the part of the alleged inducer that the patent be infringed." *Insituform Technologies, Inc. v. CAT Contracting, Inc.*, 385 F.3d 1360, 1377-78 (Fed. Cir. 2004). Plaintiff asserts its

claims under this theory against defendant Quanta Storage only.

With respect to acts of direct infringement, plaintiff points to use of the accused devices by Hewlett-Packard, Dell and Gateway, who test the drives before selling them, and to the at least 1 million accused drives that have been sold to consumers. Defendants say that plaintiff's evidence is overly speculative because it does not point to specific acts of infringement. Plaintiff says there is sufficient circumstantial evidence from which to infer those acts of infringement. On this point, I think defendants are again requiring the plaintiff to prove too much, but I need not resolve this debate. Plaintiff has failed to meet its burden regarding intent.

As one can see from the quotation from *Insituform*, the standard for intent leaves something to be desired in terms of clarity: "a certain level of intent" is not exactly self-defining. The central question appears to be whether the plaintiff must prove only that the defendant knew of the *acts* that cause infringement or whether the plaintiff must also prove that the defendant knew or should have come to the legal conclusion that its acts would cause infringement. *Insituform*, 385 F.3d at 1377-78. The parties do not discuss this lack of clarity in the law and I need not resolve it in this case because plaintiff has failed to meet either standard.

The Court of Appeals for the Federal Circuit has held that intent to induce infringement may be inferred only when the defendant knowingly took "active steps" to bring about the infringing acts. *Tegal Corp. v. Tokyo Electron Co.*, 248 F.3d 1376, 1379 (Fed. Cir. 2001) ("Actively inducing,' like 'facilitating,' requires an affirmative act of some kind.").

Plaintiff points to a number of actions by defendant Quanta Storage that plaintiff believes constitutes "active inducement." I will consider each in turn.

Plaintiff proposes as a fact that defendant Quanta Storage provides "instructions" to its customers on performing the methods of the asserted claims in plaintiffs '755 and '552 patents. Plaintiff is correct that the court of appeals has held on a number of occasions that instructing customers how to perform a patented method may qualify as active inducement under § 271(b). *Metabolite Laboratories, Inc. v. Laboratory Corp. of America Holdings*, 370 F.3d 1354, 1365 (Fed. Cir. 2004); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1272 (Fed. Cir. 1986). See also *Golden Blount, Inc. v. Robert H. Peterson Co.*, 438 F.3d 1354 (Fed. Cir. 2006); *Minnesota Mining & Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294 (Fed. Cir. 2002). But plaintiff has grossly mischaracterized the evidence it cites: the alleged instructions are actually specification sheets that do not instruct the customer to perform a particular method or explain how to do anything. They simply identify the writing speeds at which "ZCLV" may be used and include the words "buffer under-run protection." To say that this information "induced" customers to perform the patented methods would rob the term of any meaning. Plaintiff cites no authority that supports its expansive interpretation.

Further, as I explained in the context of discussing infringement of the '552 patent, the claims of the asserted patents are not synonymous with "ZCLV." That term does not appear in the claims at all and plaintiff has not adduced any evidence to suggest its patents cover *all* recording that uses "ZCLV."

The other acts to which plaintiff points have their own deficiencies. The "firmware" in the accused drives is not designed by defendants. Although defendant Quanta "fine tunes" the firmware with respect to "ZCLV," plaintiff adduces no evidence that customers are informed of this, so it is not clear how this could encourage the customer to do anything.

With respect to the presentation materials given to Dell, which include an algorithm for buffer under-run protection, plaintiff has not even established whether any of the defendants was responsible for it. Even if they were, the presentation is touting an *algorithm*, which the asserted claims do not cover.

The website instructions are even less specific. They do not even mention generally one of the patented methods.

Finally, plaintiff places great emphasis on the simple fact that defendant Quanta Storage "designs and sells" the accused devices. But this is simply a repackaging of its argument under §271(a) and (c) and one that has been flatly rejected by the court of appeals: "[S]ale of a lawful product by lawful means, with the knowledge that an unaffiliated, third party may infringe, cannot, in and of itself, constitute inducement of infringement." *Dynacore*, 363 F.3d at 1276 n.6. Defendant Quanta Storage may have known that its customers would perform the patented methods, but plaintiff adduces no evidence that Quanta encouraged infringement by its customers. Accordingly, I must grant defendants' motion for summary judgment with respect to plaintiff's claims under § 271(b).

78a
ORDER

IT IS ORDERED that

1. The motion for summary judgment filed by defendants Quanta Computer, Inc., Quanta Storage, Inc., Quanta Computer USA, Inc. and NU Technology, Inc. is GRANTED with respect to plaintiff's claims that

a, defendants infringe claims 1 and 4 of U.S. Patent No. 6,631,109, on the ground that those claims are obvious and therefore invalid;

b. defendants infringe claims 8-12 of U.S. Patent No. 6,172,955, on the ground that the accused devices do not include the limitation "starting a formatting process . . . as a background process,"

c. defendants infringe claims 1-3 of U.S. Patent No. 6,661,755, on the ground that none of the defendants has engaged in acts that violate 35 U.S.C. § 271;

d. defendants infringe claims 1 and 8 of U.S. Patent No. 5,063,552, on the ground that none of the defendants has engaged in acts that violate 35 U.S.C. § 271.

2. On the court's own motion, defendants' claims against third-party defendants Philips Taiwan, Ltd., Business Line Data and Philips Optical Storage are DISMISSED as moot.

3. The clerk of court is directed to enter judgment in favor of defendants and third party defendants and close this case.

79a

Entered this 21st day of August, 2007.

BY THE COURT:

/s/

BARBARA B. CRABB

District Judge

80a

APPENDIX C

**UNITED STATES COURT OF APPEALS FOR
THE FEDERAL CIRCUIT**

No. 2007-1567

RICOH COMPANY, LTD.,
Plaintiff-Appellant,
v.

QUANTA COMPUTER INC.,
QUANTA STORAGE, INC., QUANTA COMPUTER USA,
INC., and NU TECHNOLOGY, INC.,
Defendants-Appellees,
and

BUSINESS LINE DATA, PHILIPS OPTICAL STORAGE,
and PHILIPS TAIWAN, LTD.,
Defendants.

Appeal from the United States District Court for the
Western District of Wisconsin in case no. 06-CV-0462,
Chief Judge Barbara B. Crabb.

ORDER

A combined petition for panel rehearing and for
rehearing *en banc* having been filed by the Appellees*,
and a response thereto having been invited by the
court and filed by the Appellant, and the petition for

* *Amici Curiae*, Microsoft Corporation *et al.* were granted
leave to file a brief in support of the Appellees' combined peti-
tion for panel rehearing and rehearing *en banc*.

81a

rehearing and response, having been referred to the panel that heard the appeal, and thereafter the petition for rehearing *en banc* and response having been referred to the circuit judges who are in regular active service,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for panel rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the petition for rehearing *en banc* be, and the same hereby is, DENIED.

The mandate of the court will issue on February 24, 2009.

FOR THE COURT,

/s/

Jan Horbaly
Clerk

Dated: 02/17/2009

cc: J.C. Rozendaal
Terry D. Garnett
Constantine L. Trela, Jr.

RICOH COMPANY V QUANTA COMPUTER,
2007-1567
(DCT - 06-CV-462)

APPENDIX D

**IN THE UNITED STATES DISTRICT COURT FOR
THE WESTERN DISTRICT OF WISCONSIN**

No. 06-C-462-C

RICOH COMPANY, LTD.,
Plaintiff,

v.

QUANTA COMPUTER, INC., QUANTA STORAGE, INC.,
QUANTA COMPUTER USA, INC., NEW UNIVERSE
TECHNOLOGY, INC. and NU TECHNOLOGY, INC.,
Defendants,

and

QUANTA STORAGE, INC.,
Third-Party Plaintiff,

v.

PHILIPS TAIWAN, LTD., BUSINESS LINE DATA, and
PHILIPS OPTICAL STORAGE,
Third-Party Defendants.

JUDGMENT IN A CIVIL CASE

This action came for consideration before the court with BARBARA B. CRABB, District Judge, presiding. The issues have been considered and a decision has been rendered.

IT IS ORDERED AND ADJUDGED that judgment is entered in favor of defendants Quanta Computer, Inc., Quanta Storage, Inc., Quanta Computer USA, Inc. and NU Technology, Inc. GRANTING summary judgment with respect to plaintiff's claims that

1. defendants infringe claims 1 and 4 of U.S. Patent No. 6,631,109, on the ground that those claims are obvious and therefore invalid;

2. defendants infringe claims 8-12 of U.S. Patent No. 6,172,955, on the ground that the accused devices do not include the limitation "starting a formatting process . . . as a background process."

3. defendants infringe claims 1-3 of U.S. Patent No. 6,661,755, on the ground that none of the defendants has engaged in acts that violate 35 U.S.C. § 271;

4. defendants infringe claims 1 and 8 of U.S. Patent No. 5,063,552, on the ground that none of the defendants has engaged in acts that violate 35 U.S.C. § 271.

IT IS FURTHER ORDERED AND ADJUDGED that judgment is entered in favor of third-party defendants Philips Taiwan, Ltd., Business Line Data and Philips Optical Storage DISMISSING third-party plaintiff Quanta Storage, Inc.'s claims as moot.

Approved as to form this 24th of August, 2007.

/s/

BARBARA B. CRABB

District Judge

THERESA M. OWENS

By: /s/ L. Jensen, Deputy Clerk

Theresa M. Owens, Clerk of Court

Date AUG 24 2007

APPENDIX E**UNITED STATES CODE****TITLE 35—Patents****PART III—Patents and Protection of Patent Rights****CHAPTER 28—Infringement of Patents****§ 271. Infringement of patent**

(a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefore, infringes the patent.

(b) Whoever actively induces infringement of a patent shall be liable as an infringer.

(c) Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

(d) No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following: (1) derived revenue from acts which if performed by another without his consent would constitute contributory in-

fringement of the patent; (2) licensed or authorized another to perform acts which if performed without his consent would constitute contributory infringement of the patent; (3) sought to enforce his patent rights against infringement or contributory infringement; (4) refused to license or use any rights to the patent; or (5) conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product, unless, in view of the circumstances, the patent owner has market power in the relevant market for the patent or patented product on which the license or sale is conditioned.

(e)(1) It shall not be an act of infringement to make, use, offer to sell, or sell within the United States or import into the United States a patented invention (other than a new animal drug or veterinary biological product (as those terms are used in the Federal Food, Drug, and Cosmetic Act and the Act of March 4, 1913) which is primarily manufactured using recombinant DNA, recombinant RNA, hybridoma technology, or other processes involving site specific genetic manipulation techniques) solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs or veterinary biological products.

(2) It shall be an act of infringement to submit—

(A) an application under section 505(j) of the Federal Food, Drug, and Cosmetic Act or described in section 505(b)(2) of such Act for a drug claimed in a patent or the use of which is claimed in a patent, or

(B) an application under section 512 of such Act or under the Act of March 4, 1913 (21 U.S.C. 151-

158) for a drug or veterinary biological product which is not primarily manufactured using recombinant DNA, recombinant RNA, hybridoma technology, or other processes involving site specific genetic manipulation techniques and which is claimed in a patent or the use of which is claimed in a patent,

if the purpose of such submission is to obtain approval under such Act to engage in the commercial manufacture, use, or sale of a drug or veterinary biological product claimed in a patent or the use of which is claimed in a patent before the expiration of such patent.

(3) In any action for patent infringement brought under this section, no injunctive or other relief may be granted which would prohibit the making, using, offering to sell, or selling within the United States or importing into the United States of a patented invention under paragraph (1).

(4) For an act of infringement described in paragraph (2)—

(A) the court shall order the effective date of any approval of the drug or veterinary biological product involved in the infringement to be a date which is not earlier than the date of the expiration of the patent which has been infringed,

(B) injunctive relief may be granted against an infringer to prevent the commercial manufacture, use, offer to sell, or sale within the United States or importation into the United States of an approved drug or veterinary biological product, and

(C) damages or other monetary relief may be awarded against an infringer only if there has been commercial manufacture, use, offer to sell, or sale

within the United States or importation into the United States of an approved drug or veterinary biological product.

The remedies prescribed by subparagraphs (A), (B), and (C) are the only remedies which may be granted by a court for an act of infringement described in paragraph (2), except that a court may award attorney fees under section 285.

(5) Where a person has filed an application described in paragraph (2) that includes a certification under subsection (b)(2)(A)(iv) or (j)(2)(A)(vii)(IV) of section 505 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355), and neither the owner of the patent that is the subject of the certification nor the holder of the approved application under subsection (b) of such section for the drug that is claimed by the patent or a use of which is claimed by the patent brought an action for infringement of such patent before the expiration of 45 days after the date on which the notice given under subsection (b)(3) or (j)(2)(B) of such section was received, the courts of the United States shall, to the extent consistent with the Constitution, have subject matter jurisdiction in any action brought by such person under section 2201 of title 28 for a declaratory judgment that such patent is invalid or not infringed.

(f)(1) Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

(2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

(g) Whoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States shall be liable as an infringer, if the importation, offer to sell, sale, or use of the product occurs during the term of such process patent. In an action for infringement of a process patent, no remedy may be granted for infringement on account of the noncommercial use or retail sale of a product unless there is no adequate remedy under this title for infringement on account of the importation or other use, offer to sell, or sale of that product. A product which is made by a patented process will, for purposes of this title, not be considered to be so made after—

(1) it is materially changed by subsequent processes; or

(2) it becomes a trivial and nonessential component of another product.

(h) As used in this section, the term "whoever" includes any State, any instrumentality of a State, and any officer or employee of a State or instrumentality

of a State acting in his official capacity. Any State, and any such instrumentality, officer, or employee, shall be subject to the provisions of this title in the same manner and to the same extent as any non-governmental entity.

(i) As used in this section, an "offer for sale" or an "offer to sell" by a person other than the patentee, or any designee of the patentee, is that in which the sale will occur before the expiration of the term of the patent.